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Ministry of
Revenue

**Assessment
Valuation
Manual**

Volumes 1, 2 & 3

**Residential, Commercial
& Farms**

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RESIDENTIAL

GENERAL COMMENTS

The specifications, cost factors and additives for single-family residential structures which follow are developed for "C" and "D" character of construction classes. Current construction techniques and components are considered in the specifications for the various quality classes. Those structural units as described in the specifications are included in the basic cost factors.

The multiple residential cost factors are prepared for application with semi-detached, row housing, condominiums, walk up apartments (2-4 storeys), apartments over stores and most other residential structures where the advantage of common walls is included in the construction. Although specifications for multiple residential have not been included, it is assumed that single family residential specifications will be utilized as a guide.

The procedure for estimating the cost of multi-storey apartment buildings (4 storeys and over) is included with specifications, cost factors and additives, for "B" and "C" character of construction classes, at the end of the Residential Section.

The cost factors found throughout this Section of the Handbook, have been developed from market data, with a base year of 1969.

CHARACTER OF CONSTRUCTION

The characteristics that indicate into which classification a building should be placed are:-

CLASS "A": **Framing:** Structural steel columns and beams fireproofed with masonry, concrete, plaster or other incombustible material.

Floor: Concrete or concrete covered steel deck, fireproofed.

Roof: Formed concrete, precast slabs, concrete or gypsum on steel deck, fireproofed.

Walls: Non-bearing cavity or curtain walls, masonry, concrete, metal panels, stone.

CLASS "B": **Framing:** Reinforced concrete columns and beams.

Floor: Concrete or concrete covered steel deck, fireproofed.

Roof: Formed concrete, precast slabs, concrete or gypsum on steel deck, fireproofed.

Walls: Non-bearing cavity or curtain walls, masonry, concrete, metal panels, stone.

CLASS "C": **Framing:** Masonry or concrete load-bearing walls with or without pilasters or non load-bearing walls with concrete, wood or steel supporting the load.

Floor: Wood or steel floor joists or slab on ground.

Roof: Wood or steel joists, wood or steel deck.

Walls: Brick or concrete block masonry, tilt-up, formed concrete.

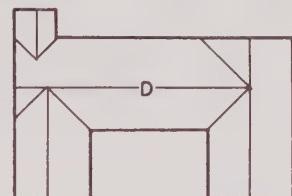
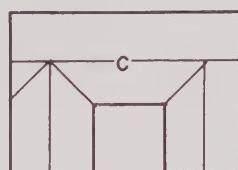
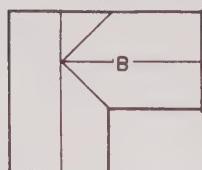
CLASS "D": **Framing:** Wood or steel studs in bearing wall, wood or steel skeleton frame.

Floor: Wood or steel floor joists or slab on ground.

Roof: Wood or steel joists, wood or steel deck.

Walls: Almost any material except masonry or concrete. May have masonry veneer on steel or wood framing.

RESIDENTIAL SHAPE ILLUSTRATIONS



The Table below is a guide to shape classification by comparison of perimeter to area.

To use, find living area of building and the perimeter of this area. Then on the table, find which shape class corresponds to the area and perimeter of the subject building.

Notice that the suggested perimeters in each area group overlap between classes. This is due to consideration being given to the extra cost incurred in building corners and framing irregular roofs. If the perimeter falls into this overlapping area, shape is determined by considering the number of corners and roof.

Example. If you have a residence of 800 sq. ft. and a perimeter of 118 feet you would classify it as an A shape if it has four corners and a B shape if it has six or more corners.

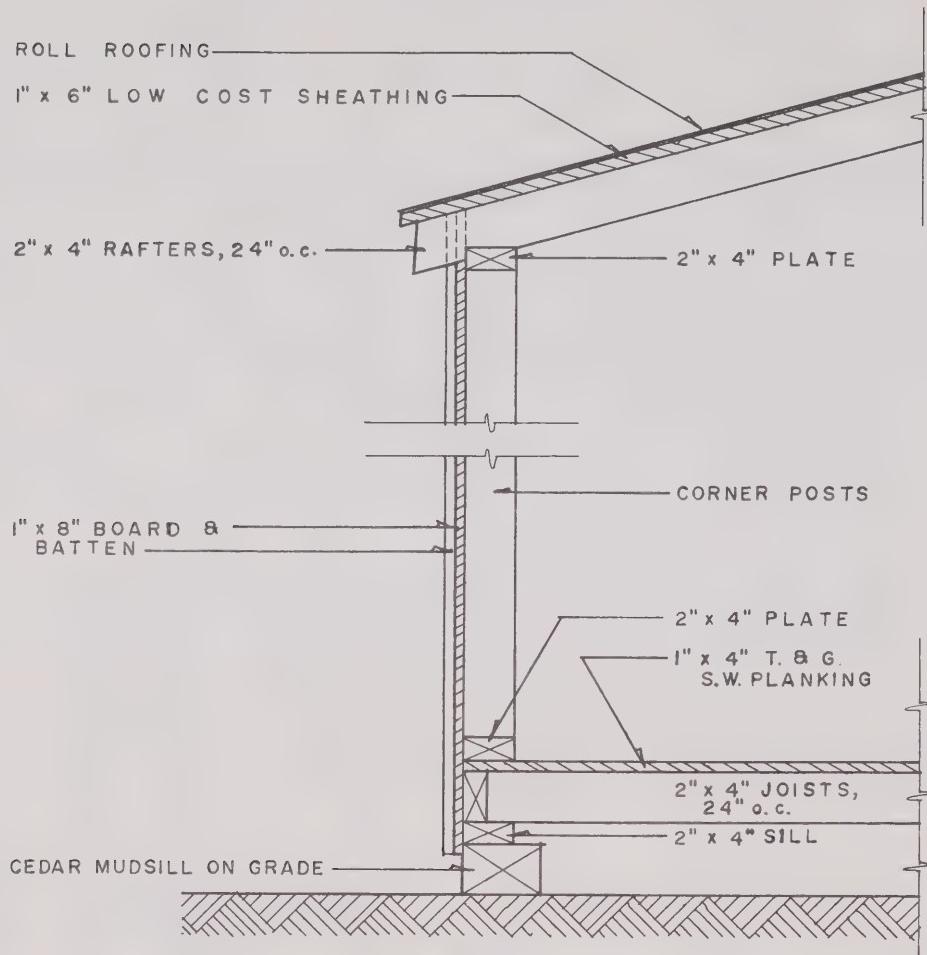
SHAPE TABLES

FLOOR AREA	SHAPE	PERIMETER
600	A	98 - 104
	B	100 - 113
	C	109 - 122
	D	118 - Up
700	A	106 - 112
	B	108 - 122
	C	118 - 132
	D	128 - Up
800	A	113 - 120
	B	116 - 131
	C	127 - 141
	D	137 - Up
900	A	120 - 127
	B	123 - 139
	C	135 - 150
	D	146 - Up
1000	A	126 - 134
	B	130 - 146
	C	142 - 158
	D	154 - Up
1100	A	133 - 141
	B	137 - 153
	C	149 - 166
	D	162 - Up
1200	A	139 - 147
	B	143 - 160
	C	156 - 173
	D	169 - Up
1300	A	144 - 153
	B	149 - 167
	C	163 - 180
	D	176 - Up

FLOOR AREA	SHAPE	PERIMETER
1400	A	150 - 159
	B	155 - 173
	C	169 - 187
	D	183 - Up
1500	A	155 - 164
	B	160 - 179
	C	175 - 194
	D	190 - Up
1600	A	160 - 170
	B	166 - 185
	C	181 - 200
	D	196 - Up
1700	A	165 - 175
	B	171 - 190
	C	186 - 206
	D	202 - Up
1800	A	170 - 180
	B	176 - 196
	C	192 - 212
	D	208 - Up
2000	A	179 - 190
	B	186 - 207
	C	203 - 224
	D	220 - Up
2200	A	188 - 199
	B	195 - 217
	C	213 - 235
	D	231 - Up
2400	A	196 - 208
	B	204 - 226
	C	222 - 245
	D	241 - Up

TYPICAL D-I CONSTRUCTION CLASS

THE INEXPENSIVE B. & B. (SINGLE WALL) HOUSE, CONVERTED GARAGE, ETC.



SPECIFICATIONS FOR D-I CONSTRUCTION CLASS

FOUNDATION: Cedar mud sills at grade level.

FLOOR STRUCTURE: Utility grade 2" x 4" wood joists @ 24" o.c. with 1" x 4" utility grade T. & G. softwood flooring.

EXTERIOR WALL STRUCTURE: 1" x 8" to 1" x 12" utility grade vertical boards with battens or equiv. Utility grade 2" x 4" top & bottom plates.

ROOF STRUCTURE: Utility grade 2" x 4" rafters @ 24" to 32" o.c. with low cost roof sheathing.

ROOF COVERING: Rolled roofing or equiv.

EXTERIOR DOORS & WINDOWS: Minimum number of low cost doors & windows.

INTERIOR FINISHES:

Floors:- Painted

Walls:- Unlined, but painted.

Ceilings:- Unlined, but painted.

KITCHEN CABINETS: None

INTERIOR DOORS & TRIM: Minimum number low cost doors.

CLOSETS & BUILT-INS: None

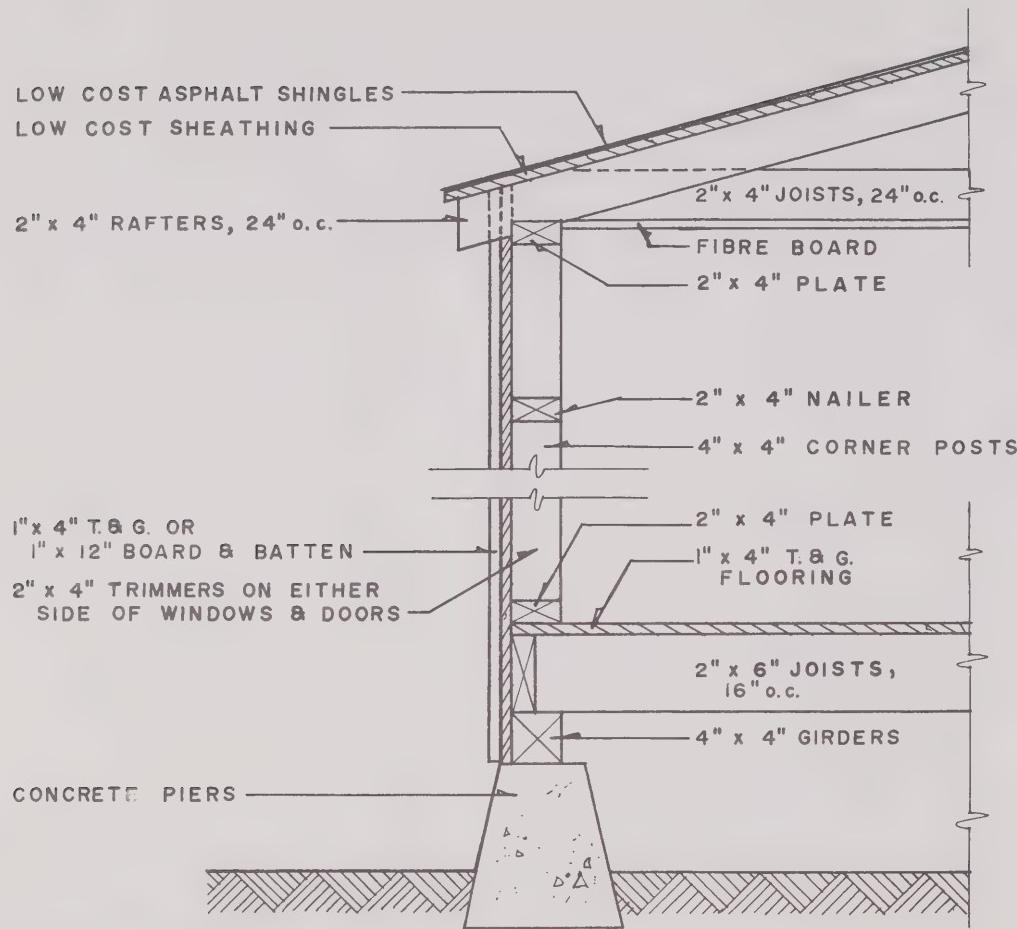
STAIRCASE: None

BATHROOM FINISH: None

PLUMBING & SANITARY SERVICES: None

ELECTRICAL SERVICE: Minimum electrical wiring, 1-outlet per room. Drop cord fixtures.

TYPICAL D-2 CONSTRUCTION CLASS
BETTER BUILT SINGLE WALL HOUSE SUCH AS FOUND IN RESORT COMMUNITIES



SPECIFICATIONS FOR D-2 CONSTRUCTION CLASS

FOUNDATION: Poured con. or masonry piers as required or equiv.

FLOOR STRUCTURE: Utility grade 2" x 6" wood joists @ 16" o.c. with 1" x 4" utility grade T. & G. softwood flooring or equiv.

EXTERIOR WALL STRUCTURE: Utility grade 1" x 8" to 1" x 12" painted vertical boards with battens. 2" x 4" top & bottom plates and mid wall nailer.

ROOF STRUCTURE: Standard grade 2" x 4" rafters @ 24" to 32" o.c. with low cost roof sheathing.

ROOF COVERING: Utility grade composition shingles or equiv.

EXTERIOR DOORS & WINDOWS: Low cost painted wood doors and dbl hung windows.

INTERIOR FINISHES:

Floors:- Painted

Walls:- Unlined but painted.

Ceilings:- Painted fibreboard or equiv.

KITCHEN CABINETS: Utility grade painted wood kitchen cabinets with lino. counter top or equiv.

INTERIOR DOORS & TRIM: Utility grade hollow core painted slab doors or equiv. with low cost painted trim.

CLOSETS & BUILT-INS: None

STAIRCASE: None

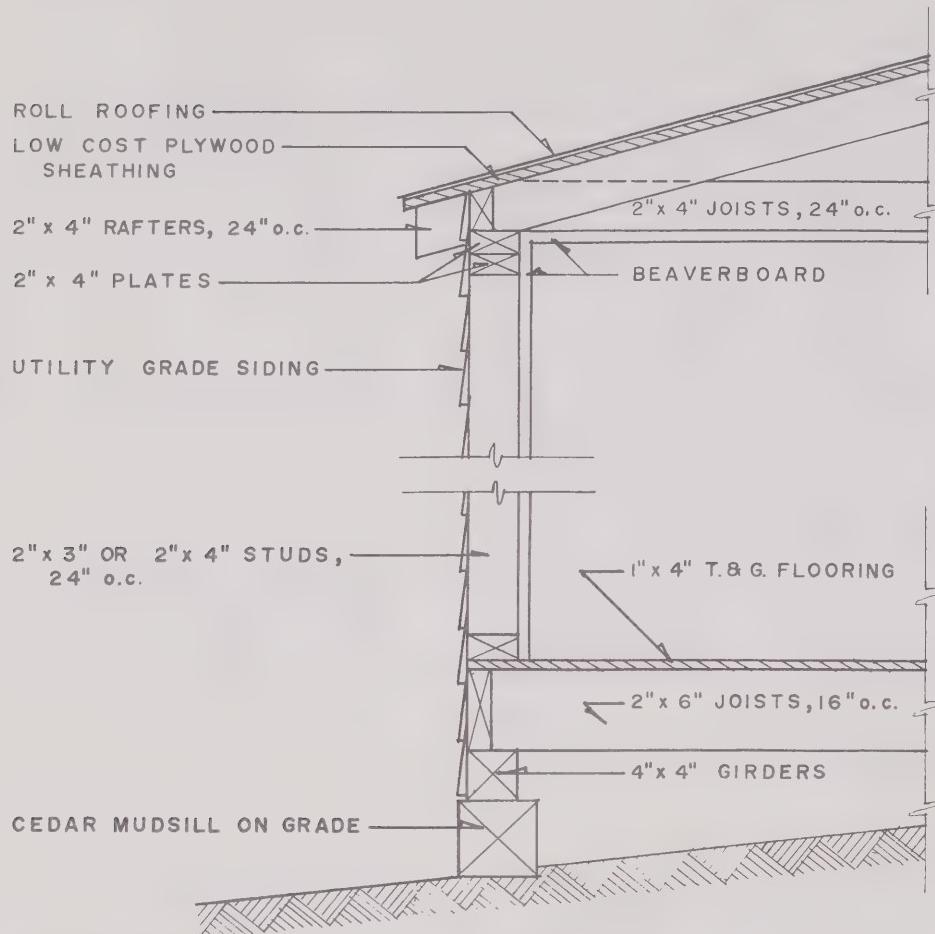
BATHROOM FINISH: None

PLUMBING & SANITARY SERVICES: None

ELECTRICAL SERVICE: 60 amp. service with minimum number of outlets.

TYPICAL D-3 CONSTRUCTION CLASS

THE MINIMUM DOUBLE WALL (STUDED) BUILDING BELOW MINIMUM CODE REQUIREMENTS
FOUND ONLY OUTSIDE CITY LIMITS OR PREDATING MODERN CODES INSIDE CITIES.



SPECIFICATIONS FOR D-3 CONSTRUCTION CLASS

FOUNDATION: Pressure treated cedar mud sills or equiv. in masonry piers with con. pads.

FLOOR STRUCTURE: Utility grade 2" x 6" wood joists @ 16" o.c. or equiv. 1" x 4" T. & G. flooring or equiv.

EXTERIOR WALL STRUCTURE: Utility grade 2" x 3" or 2" x 4" studs @ 24" o.c. with utility grade wood siding, stucco, or equiv.

ROOF STRUCTURE: Standard grade 2" x 4" wood rafters @ 24" o.c. or equiv. Low cost plywood sheathing or equiv.

ROOF COVERING: Rolled roofing or equiv.

EXTERIOR DOORS & WINDOWS: Low cost painted wood doors and double hung windows.

INTERIOR FINISHES:

Floors:- Painted

Walls:- Painted fibreboard sheathing or equiv.

Ceilings:- Painted fibreboard sheathing or equiv.

KITCHEN CABINETS: Utility grade painted wood kitchen cabinets with lino. counter top or equiv.

INTERIOR DOORS & TRIM: Utility grade hollow core painted slab doors or equiv. with painted softwood trim.

CLOSETS & BUILT-INS: Minimum closet to each bedroom.

STAIRCASE: None

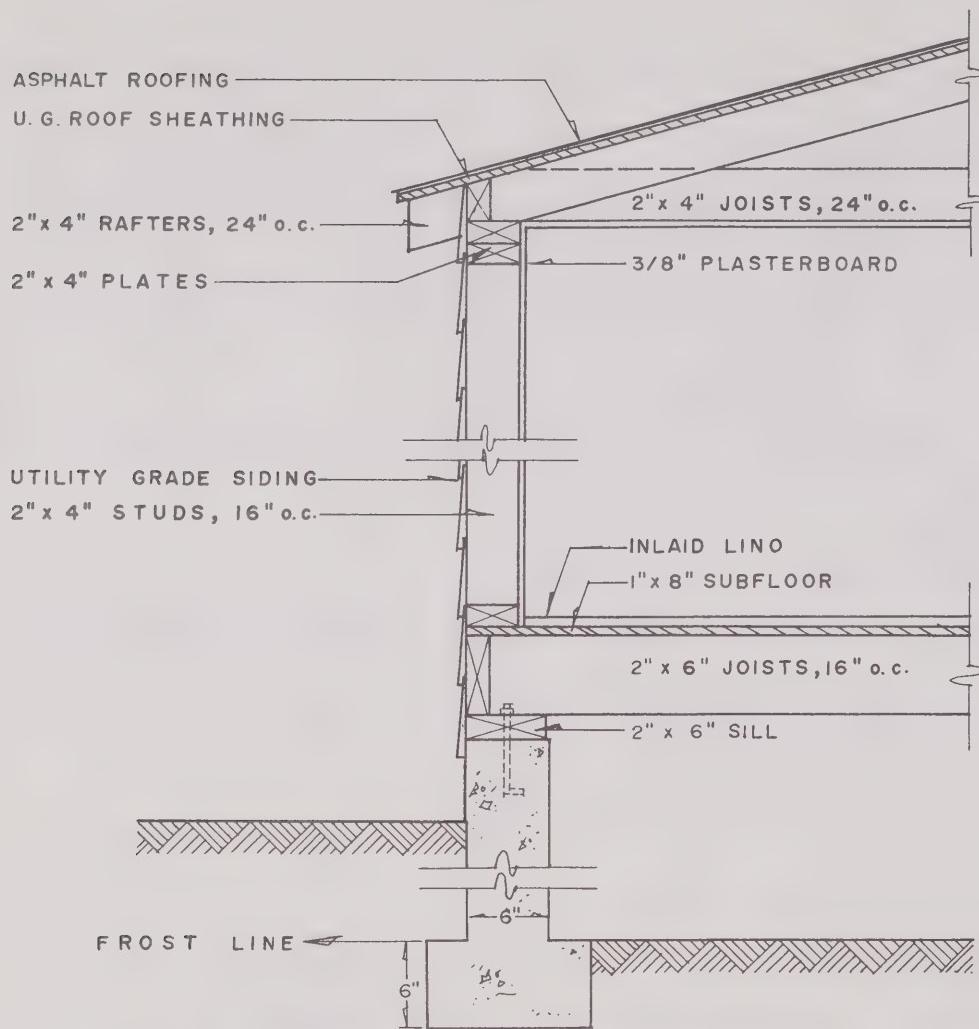
BATHROOM FINISHES: None

PLUMBING & SANITARY SERVICES: None

ELECTRICAL SERVICE: 60 amp. service with minimum number of outlets.

TYPICAL D-4 CONSTRUCTION CLASS

MINIMUM QUALITY DOUBLE WALL (STUDED) HOUSE AS PERMITTED TO BE BUILT UNDER
MINIMUM CODE REQUIREMENTS. OFTEN IMPOSSIBLE UNDER BETTER CITY CODES.



SPECIFICATIONS FOR D-4 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 6" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in piers.

FLOOR STRUCTURE: Standard grade 2" x 6" wood joists @ 16" o.c. or equiv. Utility grade subflooring.

EXTERIOR WALL STRUCTURE: Standard grade 2" x 4" studs @ 16" o.c. with utility grade wood siding, metal lath and stucco or equiv.

ROOF STRUCTURE: 2" x 4" standard grade wood rafters @ 24" o.c. or equiv., 1" x 6" utility grade roof sheathing or equiv.

ROOF COVERING: Low quality asphalt shingles or equiv.

EXTERIOR DOORS & WINDOWS: Hollow core slab doors or equiv. Dbl. hung single glazed stock windows or equiv.

INTERIOR FINISHES:

Floors:- Economy grade in-laid lino. or equiv.

Walls:- Painted 3/8" plasterboard with taped joints or equiv.

Ceilings:- Painted 3/8" plasterboard with taped joints or equiv.

KITCHEN CABINETS: Painted softwood cabinets with glazed hardboard counter.

INTERIOR DOORS & TRIM: Painted hardboard slab doors with matching softwood trim.

CLOSETS & BUILT-INS: Adequate closet to each bedroom.

STAIRCASE: Painted softwood treads, painted hardboard risers, vinyl covered metal handrail or equiv.

NOTE: Staircase only applicable in 2 storey or split level structures.

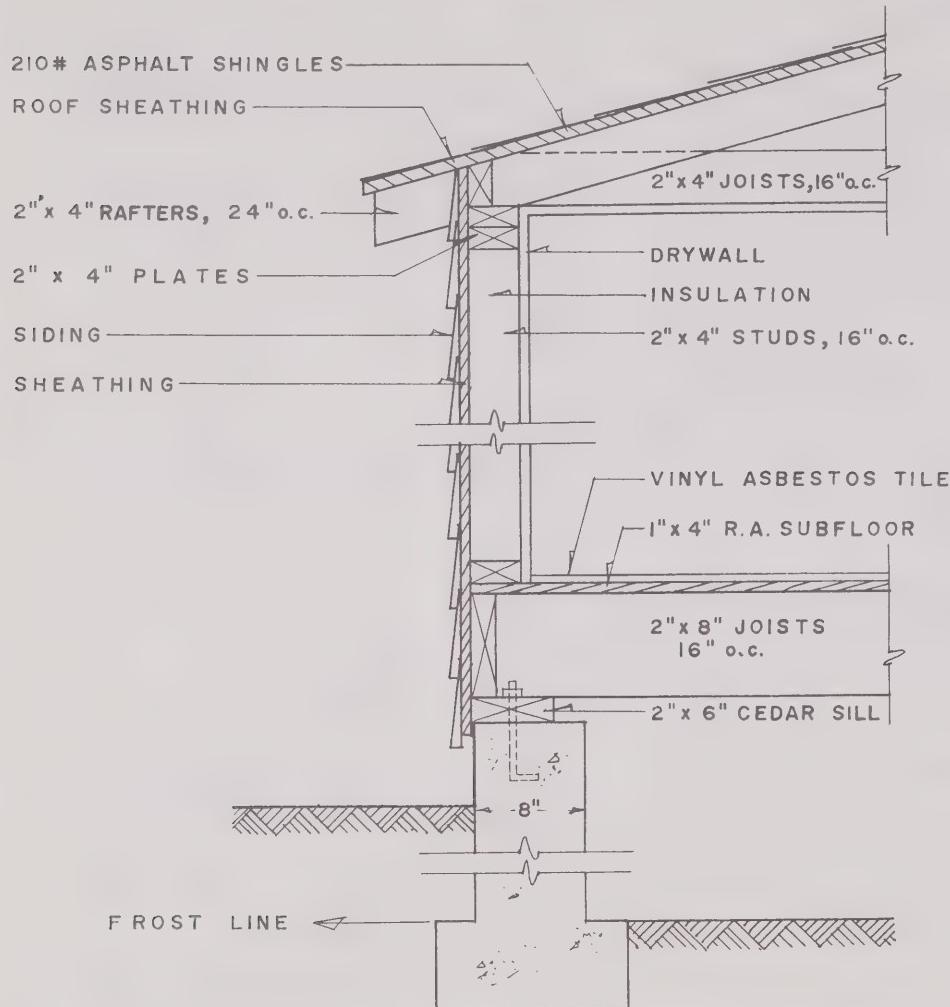
BATHROOM FINISH: Economy grade in-laid lino. floor or equiv. Plasterboard walls with impervious paint finish or equiv.

PLUMBING & SANITARY SERVICES: 4 Piece economy grade bathroom fixtures, kitchen sink and all necessary sewer connections.

ELECTRICAL SERVICE: 60 amp. service with minimum number of outlets.

TYPICAL D-5 CONSTRUCTION CLASS

MINIMUM QUALITY DOUBLE WALL (STUDED) STRUCTURE AS PERMITTED BY NATIONAL BUILDING CODE.
ATTRACTIVE BUT CHEAP "SPECULATOR BUILT HOUSE".



SPECIFICATIONS FOR D-5 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 8"-10" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in 4" floating con. slab on compacted earth.

FLOOR STRUCTURE: 2" x 8" const. grade floor joists @ 16" - 24" o.c. with ribbon bridging, 1" x 4" right angle sub-flooring or equiv.

EXTERIOR WALL STRUCTURE: Const. grade 2" x 4" studs 16" o.c. with necessary bracing & blocking, insulation and sheathing board, stucco, average grade wood siding, aluminum siding or average quality face brick.

NOTE: When brick, con. block or aluminum siding prevails, classify as "D" Class but utilize "C" Class rates.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing, with minimum overhang.

ROOF COVERING: 210#/ asphalt shingles with felt underlay or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " hollow core plywood slab doors or equiv. Db1. glazed sliding windows or dbl. hung stock windows.

INTERIOR FINISHES:

Floors:- Vinyl asbestos tile or equiv.

Walls:- Plaster finish, drywall or equiv.

Ceilings:- Plaster finish, drywall or equiv.

KITCHEN CABINETS: Softwood base cabinets or equiv. in low quality veneer finish. Plastic laminate counter top, minimal area.

INTERIOR DOORS & TRIM: Painted hardboard slab doors or equiv. Painted softwood trim.

CLOSETS & BUILT-INS: Adequate closet space.

STAIRCASE: Painted softwood treads, painted plywood risers or equiv. Vinyl covered metal handrail.

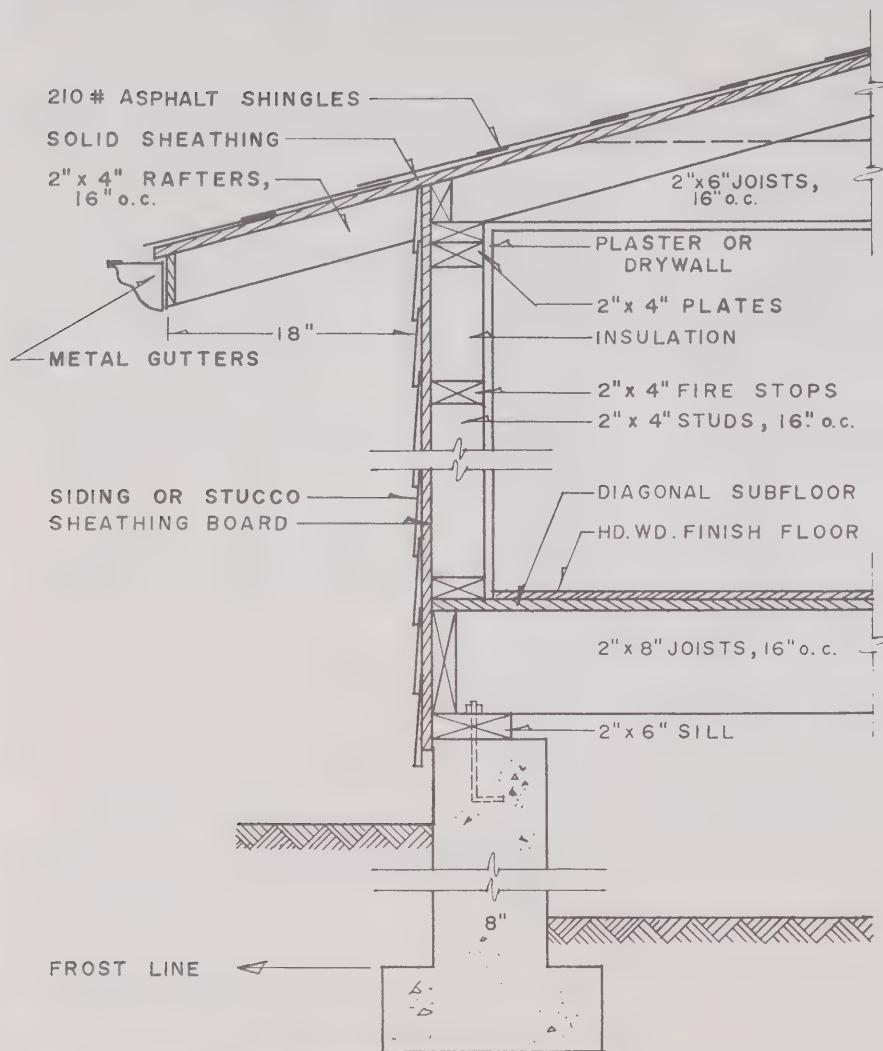
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Low-cost vinyl asbestos floor tile or equiv. Painted drywall or plaster walls with low cost waterproof wainscot around tub.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures, kitchen sink-laundry tub and necessary sewer connections.

ELECTRICAL SERVICE: 60 amp. service with adequate, minimum number of outlets.

TYPICAL D-6 CONSTRUCTION CLASS
AVERAGE QUALITY DOUBLE WALL (STUDED) STRUCTURE.
A TYPICAL SUB-DIVISION HOME



SPECIFICATIONS FOR D-6 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 8"-10" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in 4"-6" con. slab on compacted fill.

FLOOR STRUCTURE: 2" x 8" or 2" x 10" const. grade floor joists @ 16" - 24" o.c. with bridging, diagonal subfloor or equiv.

EXTERIOR WALL STRUCTURE: Const. grade 2" x 4" studs 16" o.c., bracing & blocking, insulation and sheathing board with 1" x 6" or 1" x 8" rustic wood sheathing, stucco, aluminum siding or good quality face brick.

NOTE: When masonry veneer or aluminum siding prevails, classify as "D" Class Construction but utilize "C" Class rates.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing or equiv., with average overhang.

ROOF COVERING: 210# asphalt shingles, built-up roofing, asbestos shingles or equiv.

EXTERIOR DOORS & WINDOWS: 1½" hollow core slab door or equiv. Dbl. glazed sliding windows or dbl. hung stock windows.

INTERIOR FINISHES:

Floors:- Finished hardwood, vinyl asbestos tile at entrance hall and kitchen.

Walls:- Plaster finish or drywall with plaster coat finish.

Ceilings:- Plaster with decorative finish or equiv.

KITCHEN CABINETS & VANITY: Softwood core with plastic laminate veneer cabinets, post formed plastic laminate counter and vanity.

INTERIOR DOORS & TRIM: Painted hardboard slab doors or equiv. Painted softwood trim.

CLOSETS & BUILT-INS: Adequate closet space. Valance in living and dining rooms.

STAIRCASE: Finished hardwood treads, painted plywood risers or equiv. Vinyl covered metal handrail.

NOTE: Staircase only applicable in 2 storey or split level structures.

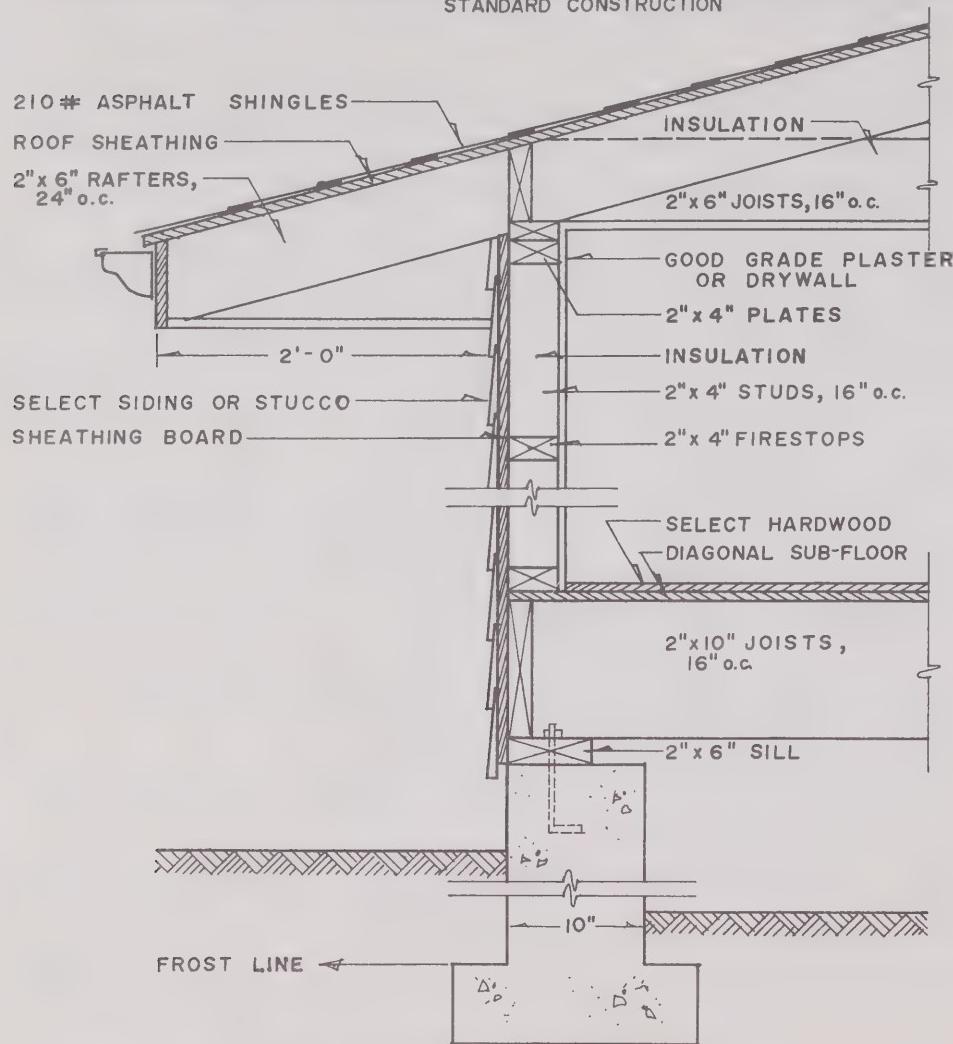
BATHROOM FINISH: Vinyl asbestos tile or equiv.; painted drywall or plaster walls; half to full ceramic tile around tub area.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures plus 2 piece in split level and two storey structures, kitchen sink and laundry tubs. Necessary sewer connections.

ELECTRICAL SERVICE: 100 Amp service with adequate number of outlets.

TYPICAL D-7 CONSTRUCTION CLASS

GOOD QUALITY DOUBLE WALL (STUDED) CONSTRUCTION BUILT FOR OWNER BY GOOD CONTRACTOR. PLANNED BY ARCHITECT TO PROVIDE REFINEMENTS SLIGHTLY ABOVE AVERAGE STANDARD CONSTRUCTION



SPECIFICATIONS FOR D-7 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 10"-12" masonry or poured con. walls with poured con. footings (below frost line), 6" reinf. con. slab on gravel fill or equiv.

FLOOR STRUCTURE: Const. grade 2" x 10" floor joists @ 16" o.c. with bridging, diagonal subfloor or equiv.

EXTERIOR WALL STRUCTURE: Const. grade 2" x 4" studs 16" o.c., bracing and blocking, insulation and sheathing board with select quality rustic siding, stucco, aluminum siding or good quality face brick.

NOTE: When masonry veneer or aluminum siding prevails, classify as "D" Class but utilize "C" Class rates.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing or equiv. with average overhang.

ROOF COVERING: 210# asphalt shingles, built-up roofing, asbestos shingles or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " solid core doors, stained and varnished with ornamental window lights or equiv. Horizontal or vertical slide double glazed windows with hermetically sealed picture or bay windows. Horizontal slide patio door.

INTERIOR FINISHES:

Floors:- Finished hardwood, vinyl asbestos tile in entrance hall and kitchen.

Walls:- Plaster finish or drywall with plaster coat finish.

Ceilings:- Plaster with decorative finish or equiv.

KITCHEN CABINETS & VANITY: Softwood core with plastic laminate veneer cabinets. Post formed plastic laminate counter & vanity.

INTERIOR DOORS & TRIM: Plywood hollow slab doors painted, or equiv. Softwood trim painted or equiv.

CLOSETS & BUILT-INS: Ample closet space with one or more walk-in closets.

STAIRCASE: Finished hardwood treads and risers with polished wood handrail.

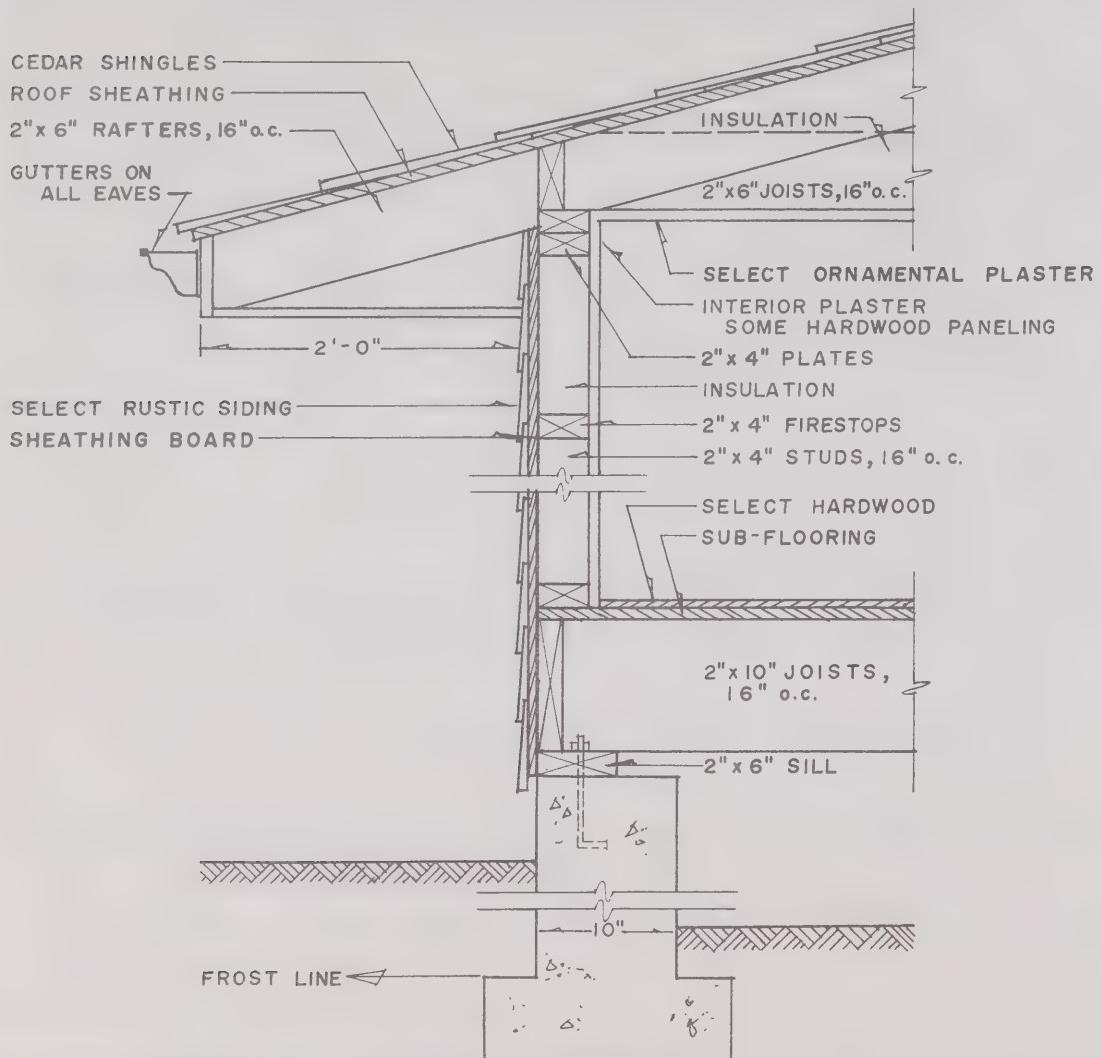
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Ceramic tile, vinyl tile or equiv; full ceramic around tub area; aluminum & glass enclosure to tub; ceramic wainscot with painted plaster above.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures and 2 piece washroom with an additional 2 piece washroom in split level and 2 storey structures; kitchen sink, laundry tubs and necessary sewer connections.

ELECTRICAL SERVICE: 100 Amp. service with adequate number of outlets.

TYPICAL D-8 CONSTRUCTION CLASS
ABOVE AVERAGE QUALITY CONSTRUCTION DESIGNED BY ARCHITECT INCLUDING
REFINEMENTS OF FINISH IN SOME ROOMS.



SPECIFICATIONS FOR D-8 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 10"-12" masonry or poured con. walls with poured con. footings (below frost line), 6" reinf. con. slab on gravel fill or equiv.

FLOOR STRUCTURE: Const. grade 2" x 10" floor joists at 16" o.c. with bridging and blocking or equiv. Diagonal subflooring or equiv.

EXTERIOR WALL STRUCTURE: Const. grade 2" x 4" studs 16" o.c., bracing & blocking, insulation and sheathing board with select quality rustic siding, stucco, select face brick or stone veneer.

NOTE: When masonry veneer or aluminum siding prevails, classify as "D" Class but utilize "C" Class rates.

ROOF STRUCTURE: 2" x 6" or 2" x 8" rafters or equiv. in wood trusses, select grade roof sheathing with ample overhang.

ROOF COVERING: Fire resistive cedar shingles, shakes or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " good quality hardwood stock door with small lights. Good quality dbl. hung or casement windows with storms. Good quality patio door.

INTERIOR FINISHES:

Floors:- Good quality hardwood floor, terrazzo or heavy duty vinyl tile at entrance, vinyl tile in kitchen or equiv.

Walls:- Select quality plaster or drywall finish. Good quality panelling or equiv.

Ceilings:- Select ornamental plaster or equiv.

KITCHEN CABINETS & VANITY: Good quality hardwood cabinets & vanities with plastic laminated counter & vanity tops with mosaic splash or equiv.

INTERIOR DOORS & TRIM: Good quality finished plywood slab doors with matching wood trim.

CLOSETS & BUILT-INS: Numerous spacious closets with prevalence of walk-ins. Many built-in features and valances.

STAIRCASE: Good quality spiral staircase with oak treads & risers, matching ornate balustrade or equiv.

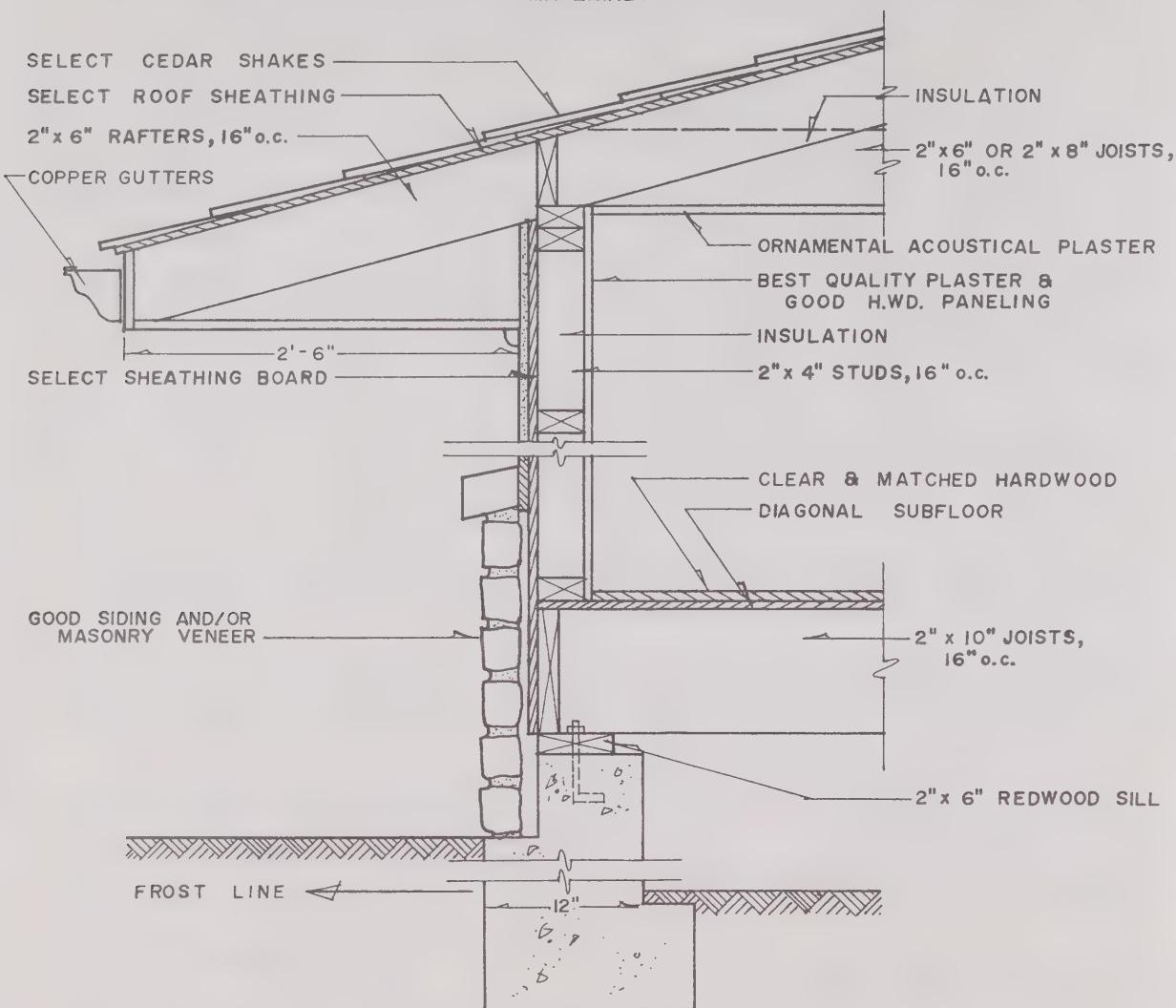
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Mosaic tile flooring or equiv.; full ceramic around tub area and ceramic wainscot. Full mirror cabinet with built-in lighting fixtures or equiv. Custom shower doors.

PLUMBING & SANITARY SERVICES: Two good quality, coloured, 4 piece bathroom fixtures plus one 2 piece washroom, dbl. kitchen sink, porcelain laundry tubs, and all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp service with many outlets.

TYPICAL D-9 CONSTRUCTION CLASS
SPECIAL QUALITY CONSTRUCTION & INTERIOR FINISH. HIGH QUALITY WORKMANSHIP
& MATERIALS.



SPECIFICATIONS FOR D-9 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 12" masonry or poured con. walls with poured con. footings (below frost line) or equiv.

FLOOR STRUCTURE: 2" x 10" or 2" x 12" const. grade floor joists @ 16" o.c. with bridging or equiv., const. grade diagonal subflooring.

EXTERIOR WALL STRUCTURE: 2" x 4" or 2" x 6" const. grade studs @ 16" o.c., bracing & blocking, insulation and sheathing. Architecturally designed red cedar siding, select face brick or stone veneers.

NOTE: When masonry veneer prevails, classify as "D" Class but use "C" Class rates.

ROOF STRUCTURE: 2" x 6" or 2" x 8" const. grade rafters, wood trusses, laminated wood beams or equiv. 1" x 6" or 1" x 8" select grade plank roof sheathing with ample overhang.

ROOF COVERING: Select quality fire resistive cedar shakes, clay fired tile or equiv. Copper trim and gutters.

EXTERIOR DOORS & WINDOWS: Custom designed entrance with select quality hardwood doors. Dbl. glazed casement windows with select hardware or equiv.

INTERIOR FINISHES:

Floors:- Select matching hardwood or equiv. with some marble, terrazzo or equiv.

Walls:- Select quality plaster. Some cornice ornamentation, custom hardwood panelling or equiv.

Ceilings:- Select quality plaster with ornamental acoustic finish or equiv.

KITCHEN CABINETS & VANITIES: Select hardwood cabinets & vanities with select ornate hardware. Custom marble vanity & counter tops. Good ceramic splash in kitchen area.

INTERIOR DOORS & TRIM: Select quality finished plywood doors with matching ornate hardwood moulding & trim.

CLOSETS & BUILT-INS: Large walk-in closet to each bedroom. Many built-in features & valances.

STAIRCASE: Custom built spiral staircase with 2" solid oak treads and open risers. Select quality wrought iron balustrade with polished oak handrail.

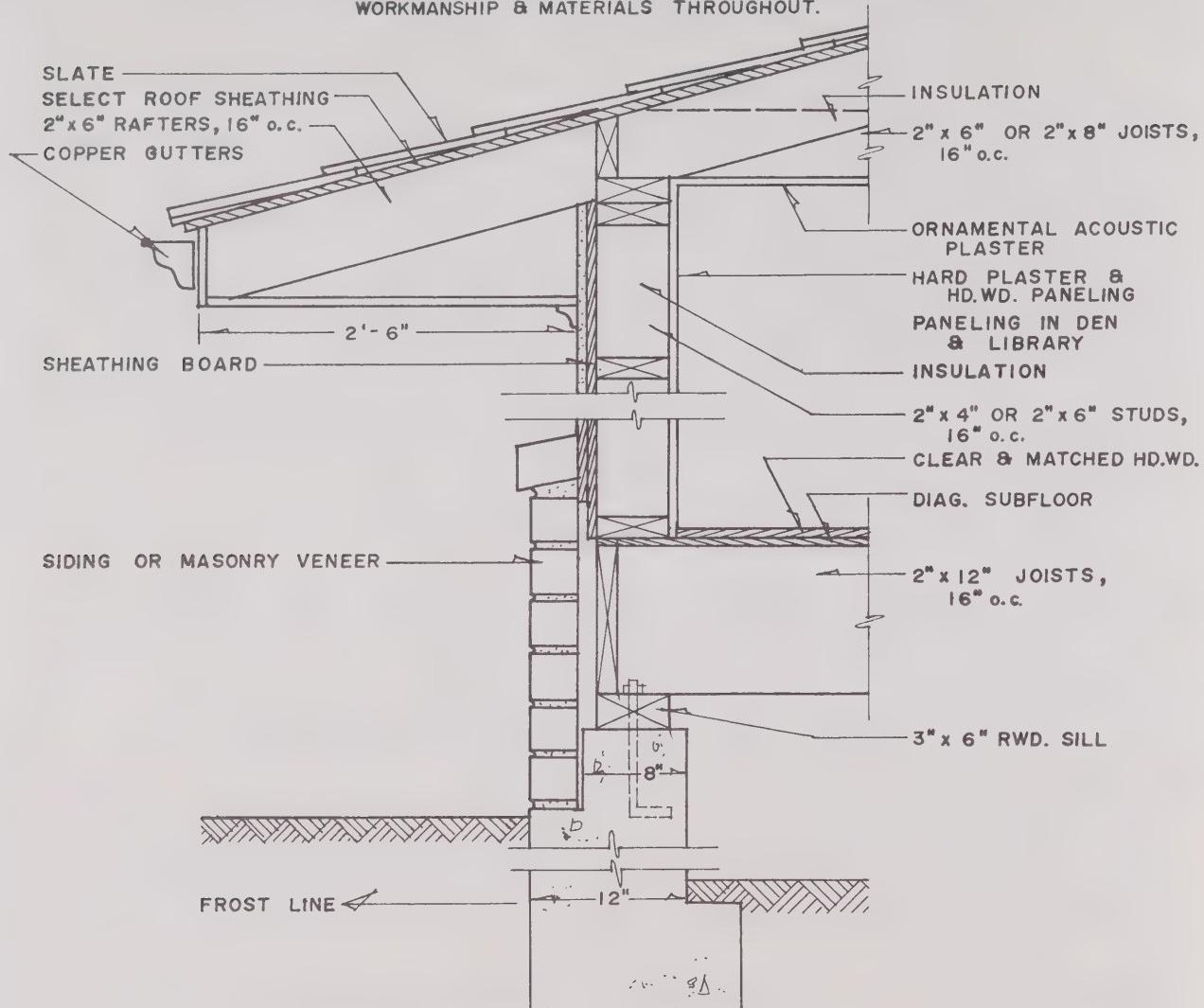
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Polished quarry tile, marble floors or equiv. Select patterned ceramic tile to full wall area. Custom shower doors. Full vanity length mirrors with built-in lighting fixtures, recessed radiant heat ceiling lights.

PLUMBING & SANITARY SERVICES: Deluxe 4 piece bathroom plus a 2 piece washroom for each two bedrooms. 2 Dbl. kitchen sinks, 2 porcelain laundry tubs with plastic laminate vanity and all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp. service with an average of 8 outlets per room. Select quality fixtures.

TYPICAL D-10 CONSTRUCTION CLASS
SPECIAL QUALITY CONSTRUCTION & INTERIOR FINISH. SUPERIOR QUALITY
WORKMANSHIP & MATERIALS THROUGHOUT.



SPECIFICATIONS FOR D-10 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 12" masonry or poured con. walls with poured con. footings (below frost line).

FLOOR STRUCTURE: 2" x 12" Const. grade floor joists @ 16" o.c. with bridging & blocking or equiv. in wood beam frame. Diag. sub-flooring or equiv.

EXTERIOR WALL STRUCTURE: 2" x 4" or 2" x 6" Const. grade studs @ 16" o.c., bracing & blocking, insulation & sheathing board. Architecturally designed red cedar siding, cedar shakes, or equiv. in select face brick or stone veneers.

NOTE: When masonry veneer prevails, classify as "D" Class but use "C" Class rates.

ROOF STRUCTURE: 2" x 6" or 2" x 8" const. grade rafters, wood trusses, laminated wood beams or equiv. Select grade roof sheathing with ample overhang.

ROOF COVERING: Select quality fire resistive cedar shakes, sheet copper, clay fired tile, slate or equiv. Copper eavestroughs, downspouts & flashing or equiv.

EXTERIOR DOORS & WINDOWS: Custom designed entrance with solid hardwood doors. Leaded stain glass lights. Ornate hardware or equiv. Select quality dbl. glazed hermetically sealed casement windows or equiv.

INTERIOR FINISHES:

Floors:- Clear and matched select hardwood plank dowelled flooring or equiv. Some terrazzo or marble or equiv.

Walls:- Select quality plaster finish with some select quality hand rubbed wood panelling & excellent embossed linen finish wallpaper.

Ceilings:- Select quality plaster, with ornamental acoustic finish or equiv.

KITCHEN CABINETS & VANITIES: Select hardwood cabinets & vanities with select ornate hardware. Custom vanity & counter tops of marble. Good ceramic splash in kitchen area.

INTERIOR DOORS & TRIM: Select quality hardwood doors with inset panels. Matching ornate mouldings & trim.

CLOSETS & BUILT-INS: 1 - walk-in closet to each bedroom with cedar lined drawers. Many built-in features and valances.

STAIRCASE: Custom built spiral staircase with solid oak treads, open risers, centre support of black anodized steel, wrought iron balustrade 2-sides, laminated, polished wood handrail or equiv.

NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Select quality marble floor or equiv. in terrazzo. Marble wainscoting to walls with patterned ceramic around tub area, full height. Custom designed glass shower doors. Full length vanity mirrors with built-in lighting fixtures. Recessed radiant heat ceiling lights.

PLUMBING & SANITARY SERVICES: Full bathroom to each bedroom with custom designed fixtures. Excellent kitchen & laundry facilities with all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp. service. Remote control light system with touch control or equiv. Excellent fixtures throughout.

TYPICAL C-4 CONSTRUCTION CLASS

MINIMUM QUALITY DOUBLE WALL (MASONRY) HOUSE AS PERMITTED TO BE BUILT
UNDER MINIMUM CODE REQUIREMENTS. OFTEN IMPOSSIBLE UNDER BETTER CITY CODES.

ASPHALT ROOFING

U.G. ROOF SHEATHING

2"x 4" RAFTERS, 24" o.c.

2"x 4" JOISTS,
24" o.c.

3/8" PLASTERBOARD

PLATE

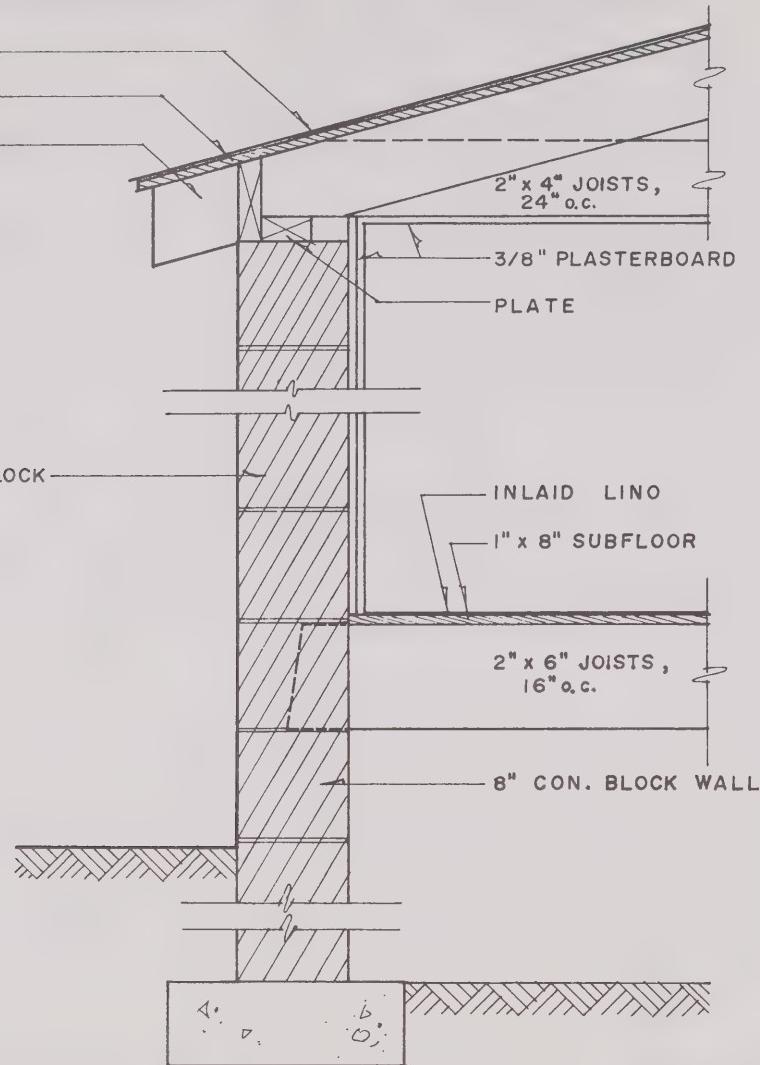
DECORATIVE 8" CON. BLOCK

INLAID LINO

1" x 8" SUBFLOOR

2"x 6" JOISTS,
16" o.c.

8" CON. BLOCK WALL



SPECIFICATIONS FOR C-4 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 8" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in piers.

FLOOR STRUCTURE: Standard grade 2" x 6" wood joists @ 16" o.c. or equiv. Utility grade subflooring.

EXTERIOR WALL STRUCTURE: 6" Reinf. con., 8" decorative block, con. block with stucco, common brick, clay tile, or equiv.

ROOF STRUCTURE: 2" x 4" standard grade wood rafters @ 24" o.c. or equiv., 1" x 6" utility grade roof sheathing or equiv.

ROOF COVERING: Low quality asphalt shingles or equiv.

EXTERIOR DOORS & WINDOWS: Hollow core slab doors or equiv. Dbl. hung single glazed stock windows or equiv.

INTERIOR FINISHES:

Floors:- Economy grade in-laid lino. or equiv.

Walls:- Painted 3/8" plasterboard with taped joints or equiv.

Ceilings:- Painted 3/8" plasterboard with taped joints or equiv.

KITCHEN CABINETS: Painted softwood cabinets with glazed hardboard counter.

INTERIOR DOORS & TRIM: Painted hardboard slab doors with matching softwood trim.

CLOSETS & BUILT-INS: Adequate closet to each bedroom.

STAIRCASE: Painted softwood treads, painted hardboard risers, vinyl covered metal handrail or equiv.

NOTE: Staircase only applicable in 2 storey or split level structures.

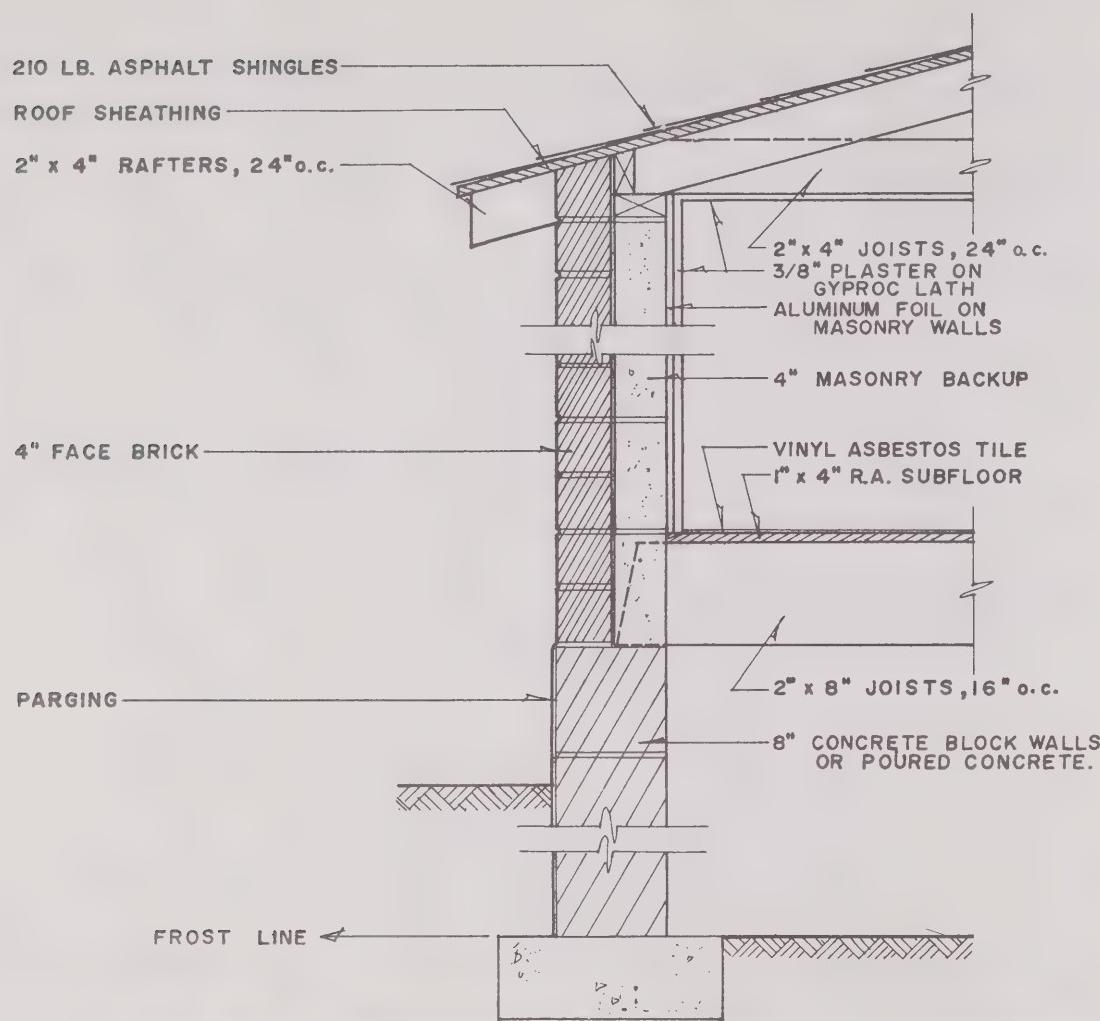
BATHROOM FINISH: Economy grade in-laid lino. floor or equiv. Plasterboard walls with impervious paint finish or equiv.

PLUMBING & SANITARY SERVICES: 4 Piece economy grade bathroom fixtures, kitchen sink and all necessary sewer connections.

ELECTRICAL SERVICE: 60 amp. service with minimum number of outlets.

TYPICAL C-5 CONSTRUCTION CLASS

MIN. QUALITY DOUBLE WALL (MASONRY) HOUSE AS PERMITTED BY NATIONAL BUILDING CODE. ATTRACTIVE BUT CHEAP "SPECULATOR BUILT HOUSE".



SPECIFICATIONS FOR C-5 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 8"-10" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in 4" floating con. slab on compacted earth.

FLOOR STRUCTURE: 2" x 8" const. grade floor joists @ 16" - 24" o.c. with ribbon bridging, 1" x 4" right angle sub-flooring or equiv.

EXTERIOR WALL STRUCTURE: Average quality face brick with 4" con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing, with minimum overhang.

ROOF COVERING: 210# asphalt shingles with felt underlay or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " hollow core plywood slab doors or equiv. Dbl. glazed sliding windows or dbl. hung stock windows.

INTERIOR FINISHES:

Floors:- Vinyl asbestos tile or equiv.

Walls:- Plaster finish, drywall or equiv.

Ceilings:- Plaster finish, drywall or equiv.

KITCHEN CABINETS: Softwood base cabinets or equiv. in low quality veneer finish. Plastic laminate counter top, minimal area.

INTERIOR DOORS & TRIM: Painted hardboard slab doors or equiv. Painted softwood trim.

CLOSETS & BUILT-INS: Adequate closet space.

STAIRCASE: Painted softwood treads, painted plywood risers or equiv. Vinyl covered metal handrail.

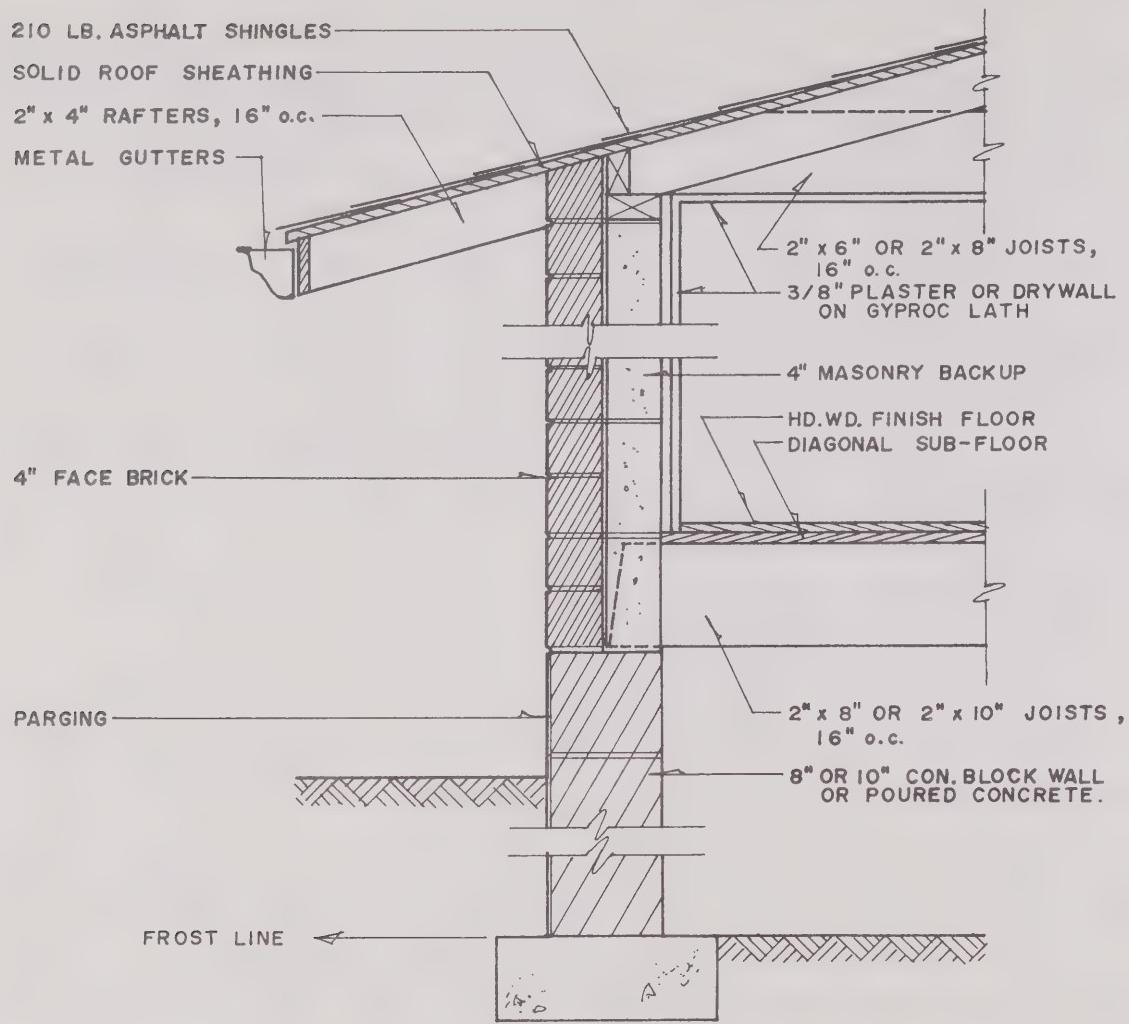
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Low-cost vinyl asbestos floor tile or equiv. Painted drywall or plaster walls with low cost waterproof wainscot around tub.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures, kitchen sink-laundry tub and necessary sewer connections.

ELECTRICAL SERVICE: 60 amp. service with adequate, minimum number of outlets.

TYPICAL C-6 CONSTRUCTION CLASS
AVERAGE QUALITY DOUBLE WALL (MASONRY) STANDARD CONSTRUCTION.
A TYPICAL SUB-DIVISION HOME.



SPECIFICATIONS FOR C-6 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 8"-10" masonry or poured con. walls with poured con. footings (below frost line) or equiv. in 4"-6" con. slab on compacted fill.

FLOOR STRUCTURE: 2" x 8" or 2" x 10" const. grade floor joists @ 16" - 24" o.c. with bridging, diagonal subfloor or equiv.

EXTERIOR WALL STRUCTURE: Good quality face brick with some cut stone. 4" Con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing or equiv., with average overhang.

ROOF COVERING: 210# asphalt shingles, built-up roofing, asbestos shingles or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " hollow core slab door or equiv. Dbl. glazed sliding windows or dbl. hung stock windows.

INTERIOR FINISHES:

Floors:- Finished hardwood, vinyl asbestos tile at entrance hall and kitchen.

Walls:- Plaster finish or drywall with plaster coat finish.

Ceilings:- Plaster with decorative finish or equiv.

KITCHEN CABINETS & VANITY: Softwood core with plastic laminate veneer cabinets, post formed plastic laminate counter and vanity.

INTERIOR DOORS & TRIM: Painted hardboard slab doors or equiv. Painted softwood trim.

CLOSETS & BUILT-INS: Adequate closet space. Valance in living and dining rooms.

STAIRCASE: Finished hardwood treads, painted plywood risers or equiv. Vinyl covered metal handrail.

NOTE: Staircase only applicable in 2 storey or split level structures.

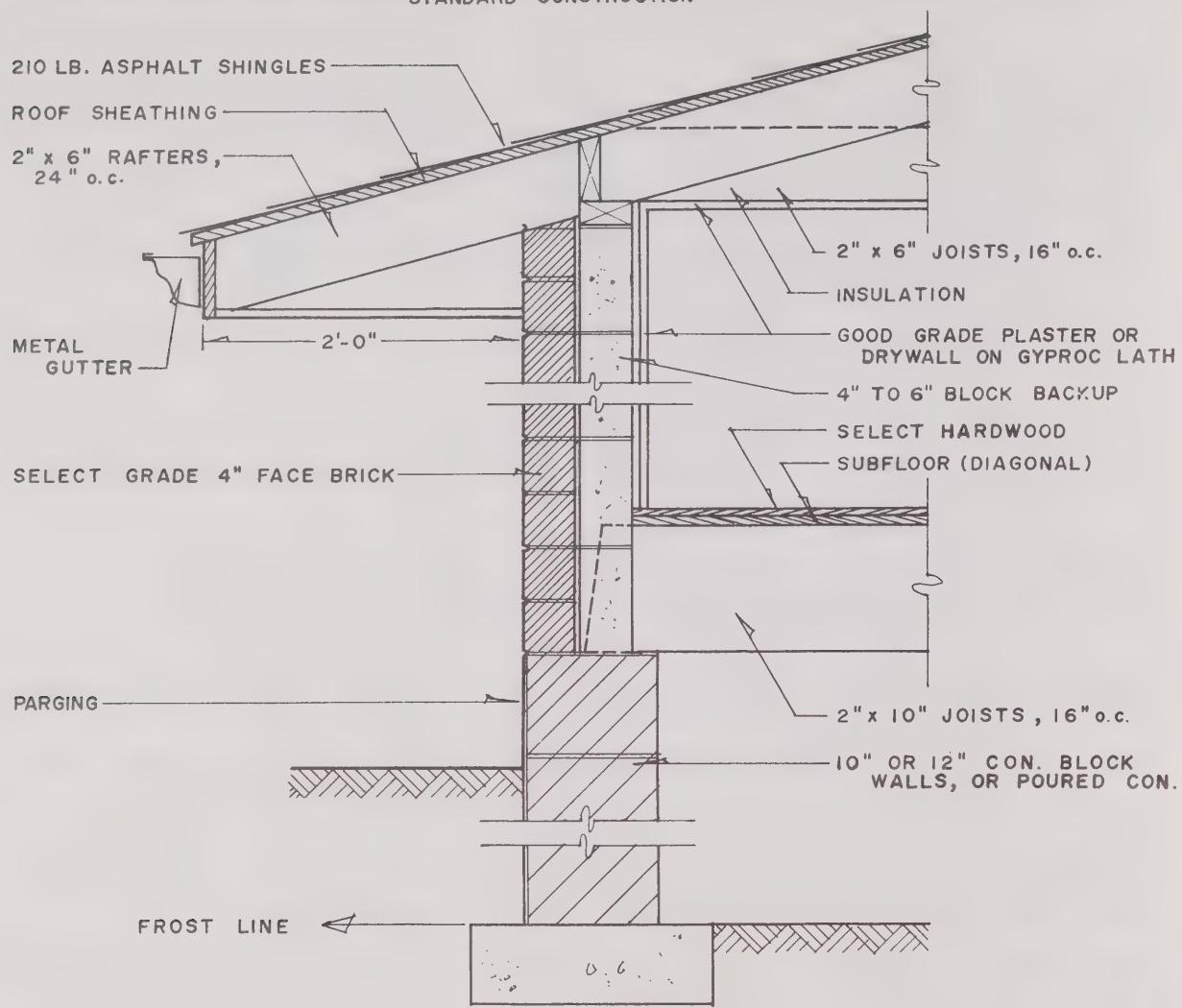
BATHROOM FINISH: Vinyl asbestos tile or equiv.; painted drywall or plaster walls; half to full ceramic tile around tub area.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures plus 2 piece in split level and two storey structures, kitchen sink and laundry tubs. Necessary sewer connections.

ELECTRICAL SERVICE: 100 Amp. service with adequate number of outlets.

TYPICAL C-7 CONSTRUCTION CLASS

GOOD QUALITY DOUBLE WALL (MASONRY) CONSTRUCTION BUILT FOR OWNER BY GOOD CONTRACTOR. PLANNED BY ARCHITECT TO PROVIDE REFINEMENTS SLIGHTLY ABOVE AVERAGE STANDARD CONSTRUCTION



SPECIFICATIONS FOR C-7 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 10"-12" masonry or poured con. walls with poured con. footings (below frost line), 6" reinf. con. slab on gravel fill or equiv.

FLOOR STRUCTURE: Const. grade 2" x 10" floor joists @ 16" o.c. with bridging, diagonal subfloor or equiv.

EXTERIOR WALL STRUCTURE: Select grade face brick with cut stone or natural field stone. 4"-6" Con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 4" or 2" x 6" rafters or equiv. in wood trusses. Const. grade roof sheathing or equiv. with average overhang.

ROOF COVERING: 210# asphalt shingles, built-up roofing, asbestos shingles or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{1}{4}$ " solid core doors, stained and varnished with ornamental window lights or equiv. Horizontal or vertical slide double glazed windows with hermetically sealed picture or bay windows. Horizontal slide patio door.

INTERIOR FINISHES:

Floors:- Finished hardwood, vinyl asbestos tile in entrance hall and kitchen.

Walls:- Plaster finish or drywall with plaster coat finish.

Ceilings:- Plaster with decorative finish or equiv.

KITCHEN CABINETS & VANITY: Softwood core with plastic laminate veneer cabinets. Post formed plastic laminate counter & vanity.

INTERIOR DOORS & TRIM: Plywood hollow slab doors painted, or equiv. Softwood trim painted or equiv.

CLOSETS & BUILT-INS: Ample closet space with one or more walk-in closets.

STAIRCASE: Finished hardwood treads and risers with polished wood handrail.

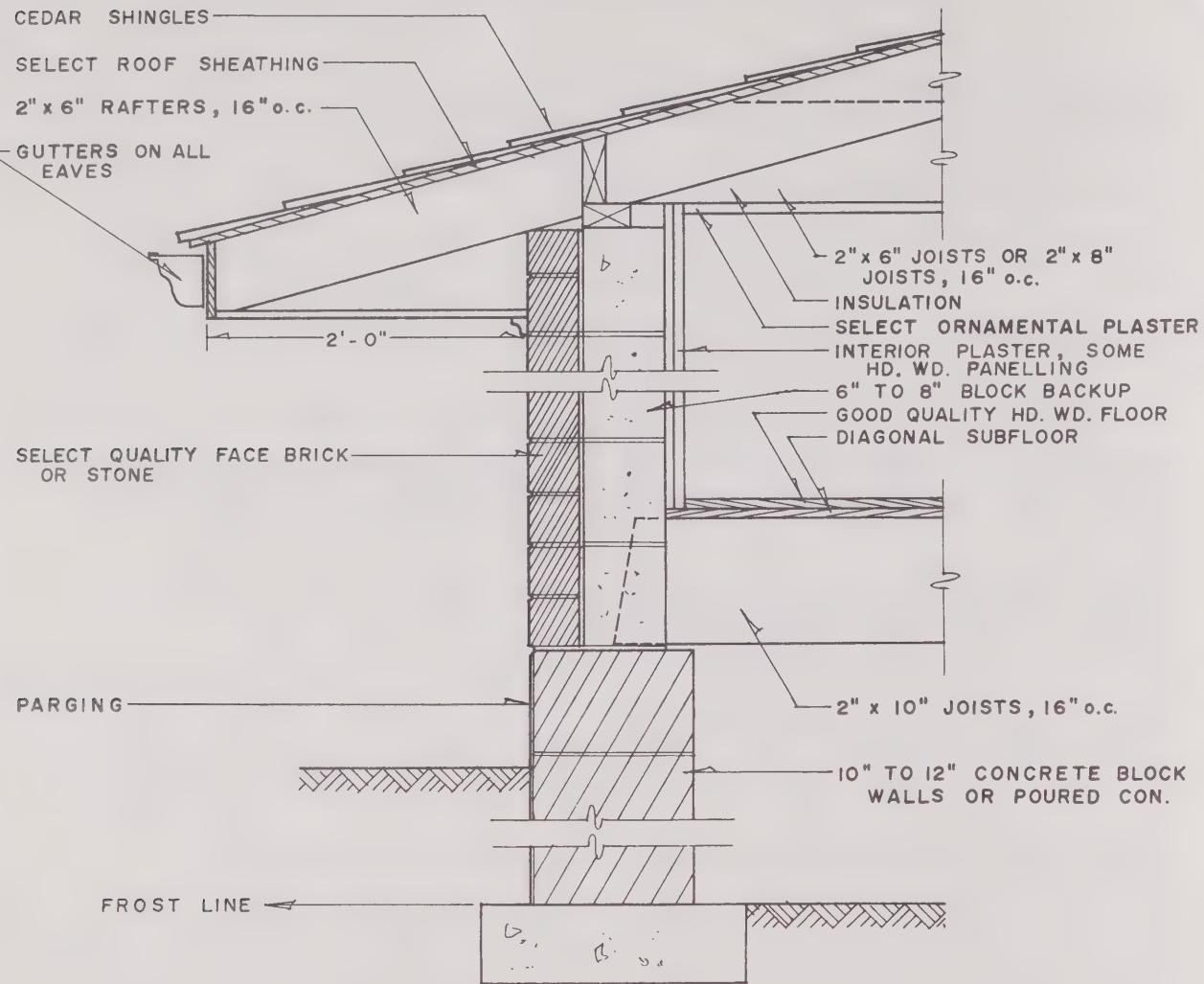
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Ceramic tile, vinyl tile or equiv; full ceramic around tub area; aluminum & glass enclosure to tub; ceramic wainscot with painted plaster above.

PLUMBING & SANITARY SERVICES: 4 Piece standard bathroom fixtures and 2 piece washroom with an additional 2 piece washroom in split level and 2 storey structures; kitchen sink, laundry tubs and necessary sewer connections.

ELECTRICAL SERVICE: 100 Amp. service with adequate number of outlets.

TYPICAL C-8 CONSTRUCTION CLASS
ABOVE AVERAGE QUALITY CONSTRUCTION DESIGNED BY ARCHITECT INCLUDING
REFINEMENTS OF FINISH IN SOME ROOMS.



SPECIFICATIONS FOR C-8 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 10"-12" masonry or poured con. walls with poured con. footings (below frost line), 6" reinf. con. slab on gravel fill or equiv.

FLOOR STRUCTURE: Const. grade 2" x 10" floor joists at 16" o.c. with bridging and blocking or equiv. Diagonal subflooring or equiv.

EXTERIOR WALL STRUCTURE: Select quality face brick, natural stone or equiv. with 6"-8" con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 6" or 2" x 8" rafters or equiv. in wood trusses, select grade roof sheathing with ample overhang.

ROOF COVERING: Fire resistive cedar shingles, shakes or equiv.

EXTERIOR DOORS & WINDOWS: 1 $\frac{3}{4}$ " good quality hardwood stock door with small lights. Good quality dbl. hung or casement windows with storms. Good quality patio door.

INTERIOR FINISHES:

Floors:- Good quality hardwood floor, terrazzo or heavy duty vinyl tile at entrance, vinyl tile in kitchen or equiv.

Walls:- Select quality plaster or drywall finish. Good quality panelling or equiv.

Ceilings:- Select ornamental plaster or equiv.

KITCHEN CABINETS & VANITY: Good quality hardwood cabinets & vanities with plastic laminated counter & vanity tops with mosaic splash or equiv.

INTERIOR DOORS & TRIM: Good quality finished plywood slab doors with matching wood trim.

CLOSETS & BUILT-INS: Numerous spacious closets with prevalence of walk-ins. Many built-in features and valances.

STAIRCASE: Good quality spiral staircase with oak treads & risers, matching ornate balustrade or equiv.

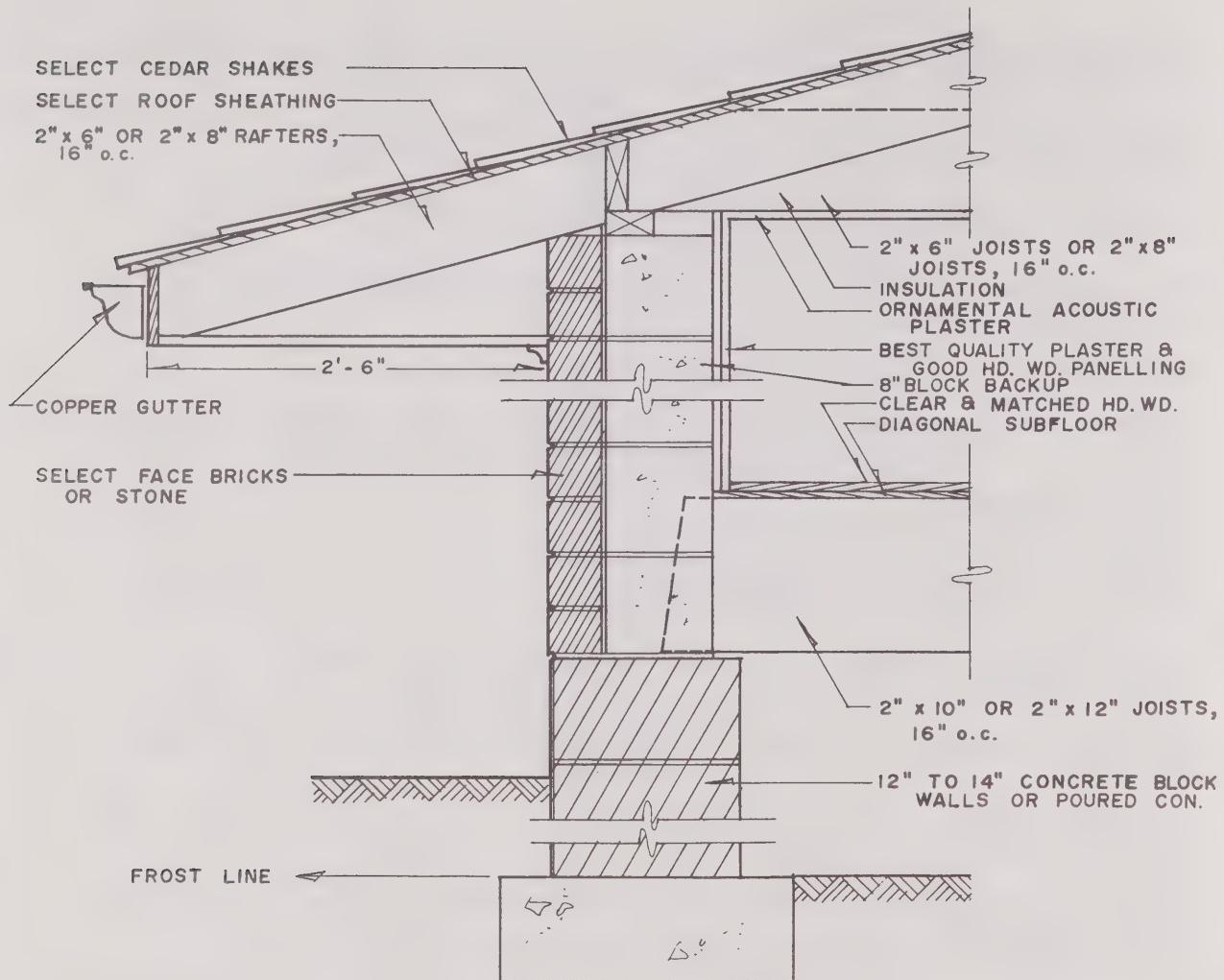
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Mosaic tile flooring or equiv.; full ceramic around tub area and ceramic wainscot. Full mirror cabinet with built-in lighting fixtures or equiv. Custom shower doors.

PLUMBING & SANITARY SERVICES: Two good quality, coloured, 4 piece bathroom fixtures plus one 2 piece washroom, dbl. kitchen sink, porcelain laundry tubs, and all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp. service with many outlets.

TYPICAL C-9 CONSTRUCTION CLASS
SPECIAL QUALITY CONSTRUCTION & INTERIOR FINISH.
HIGH QUALITY WORKMANSHIP & MATERIALS.



SPECIFICATIONS FOR C-9 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 12"-14" masonry or poured con. walls with poured con. footings (below frost line) or equiv.

FLOOR STRUCTURE: 2" x 10" or 2" x 12" const. grade floor joists @ 16" o.c. with bridging or equiv., const. grade diagonal subflooring.

EXTERIOR WALL STRUCTURE: Architecturally designed with select quality face brick, limestone or equiv. 8" Con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 6" or 2" x 8" const. grade rafters, wood trusses, laminated wood beams or equiv. 1" x 6" or 1" x 8" select grade plank roof sheathing with ample overhang.

ROOF COVERING: Select quality fire resistive cedar shakes, clay fired tile or equiv. Copper trim and gutters.

EXTERIOR DOORS & WINDOWS: Custom designed entrance with select quality hardwood doors. Dbl. glazed casement windows with select hardware or equiv.

INTERIOR FINISHES:

Floors:- Select matching hardwood or equiv. with some marble, terrazzo or equiv.

Walls:- Select quality plaster. Some cornice ornamentation, custom hardwood panelling or equiv.

Ceilings:- Select quality plaster with ornamental acoustic finish or equiv.

KITCHEN CABINETS & VANITIES: Select hardwood cabinets & vanities with select ornate hardware. Custom marble vanity & counter tops. Good ceramic splash in kitchen area.

INTERIOR DOORS & TRIM: Select quality finished plywood doors with matching ornate hardwood moulding & trim.

CLOSETS & BUILT-INS: Large walk-in closet to each bedroom. Many built-in features & valances.

STAIRCASE: Custom built spiral staircase with 2" solid oak treads and open risers. Select quality wrought iron balustrade with polished oak handrail.

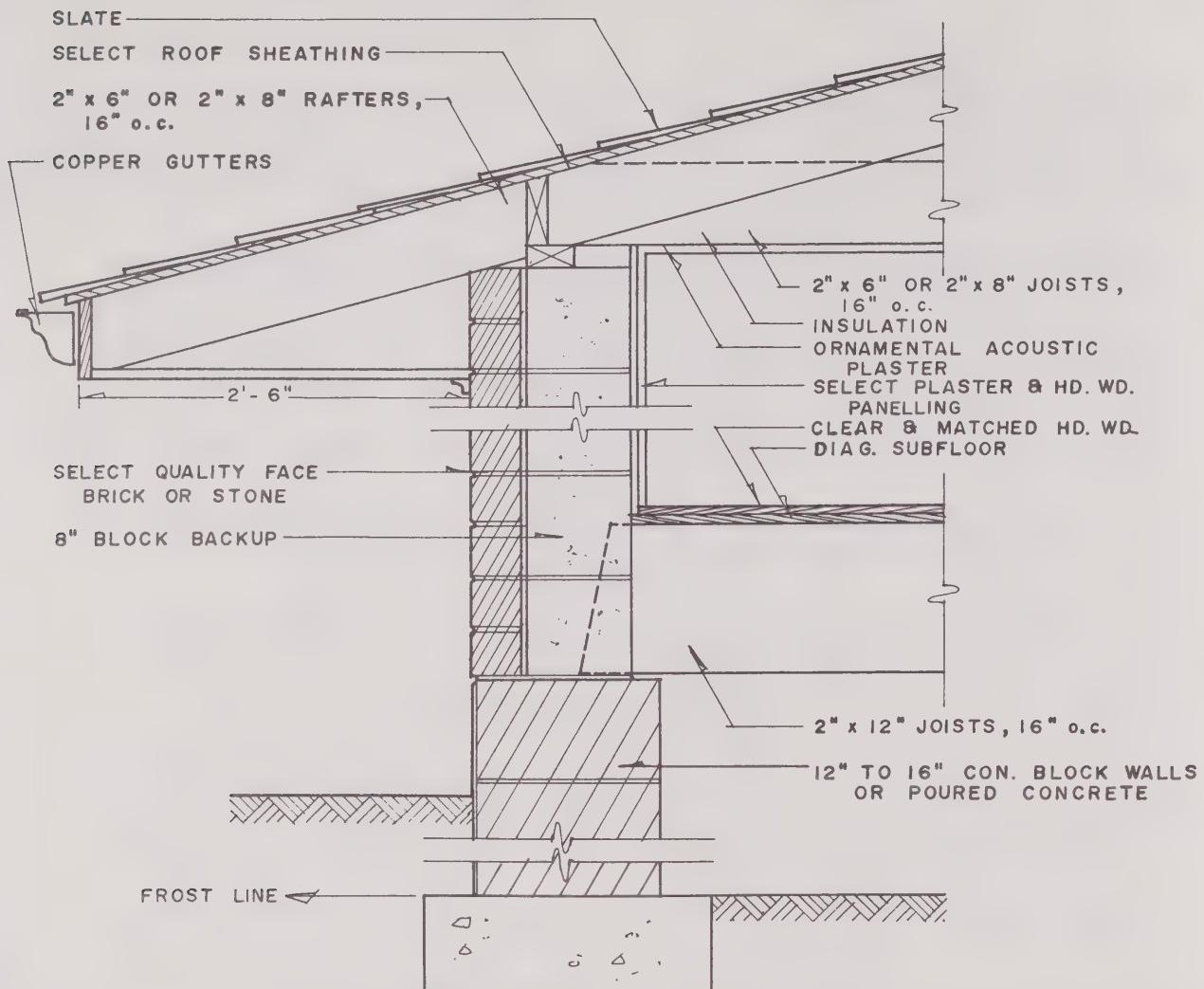
NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Polished quarry tile, marble floors or equiv. Select patterned ceramic tile to full wall area. Custom shower doors. Full vanity length mirrors with built-in lighting fixtures, recessed radiant heat ceiling lights.

PLUMBING & SANITARY SERVICES: Deluxe 4 piece bathroom plus a 2 piece washroom for each two bedrooms. 2 Dbl. kitchen sinks, 2 porcelain laundry tubs with plastic laminate vanity and all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp. service with an average of 8 outlets per room. Select quality fixtures.

TYPICAL C-10 CONSTRUCTION CLASS
SPECIAL QUALITY CONSTRUCTION & INTERIOR FINISH. SUPERIOR QUALITY
WORKMANSHIP & MATERIALS THROUGHOUT.



SPECIFICATIONS FOR C-10 CONSTRUCTION CLASS

FOUNDATION & FOOTINGS: 12"-16" masonry or poured con. walls with poured con. footings (below frost line).

FLOOR STRUCTURE: 2" x 12" Const. grade floor joists @ 16" o.c. with bridging & blocking or equiv. in wood beam frame. Diag. sub- flooring or equiv.

EXTERIOR WALL STRUCTURE: Architecturally designed with select quality face brick, limestone or equiv. 8" Con. block, cinder block or common brick back-up.

ROOF STRUCTURE: 2" x 6" or 2" x 8" const. grade rafters, wood trusses, laminated wood beams or equiv. Select grade roof sheathing with ample overhang.

ROOF COVERING: Select quality fire resistive cedar shakes, sheet copper, clay fired tile, slate or equiv. Copper eavestroughs, downspouts & flashing or equiv.

EXTERIOR DOORS & WINDOWS: Custom designed entrance with solid hardwood doors. Leaded stain glass lights. Ornate hardware or equiv. Select quality dbl. glazed hermetically sealed casement windows or equiv.

INTERIOR FINISHES:

Floors:- Clear and matched select hardwood plank dowelled flooring or equiv. Some terrazzo or marble or equiv.

Walls:- Select quality plaster finish with some select quality hand rubbed wood panelling & excellent embossed linen finish wallpaper.

Ceilings:- Select quality plaster, with ornamental acoustic finish or equiv.

KITCHEN CABINETS & VANITIES: Select hardwood cabinets & vanities with select ornate hardware. Custom vanity & counter tops of marble. Good ceramic splash in kitchen area.

INTERIOR DOORS & TRIM: Select quality hardwood doors with inset panels. Matching ornate mouldings & trim.

CLOSETS & BUILT-INS: 1 - walk-in closet to each bedroom with cedar lined drawers. Many built-in features and valances.

STAIRCASE: Custom built spiral staircase with solid oak treads, open risers, centre support of black anodized steel, wrought iron balustrade 2-sides, laminated, polished wood handrail or equiv.

NOTE: Staircase only applicable in 2 storey or split level structures.

BATHROOM FINISH: Select quality marble floor or equiv. in terrazzo. Marble wainscoting to walls with patterned ceramic around tub area, full height. Custom designed glass shower doors. Full length vanity mirrors with built-in lighting fixtures. Recessed radiant heat ceiling lights.

PLUMBING & SANITARY SERVICES: Full bathroom to each bedroom with custom designed fixtures. Excellent kitchen & laundry facilities with all necessary sewer connections.

ELECTRICAL SERVICE: 200 Amp. service. Remote control light system with touch control or equiv. Excellent fixtures throughout.

SINGLE RESIDENTIAL

SECTION 2 PAGE I

BUILDING COST FACTORS

BASE YEAR 1969

SHAPE A

CONSTRUCTION CLASS D

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
1 0	30.85	29.55	28.40	27.40	26.50	25.70	25.00	24.40	23.85	23.35	22.90	22.50	22.15	21.85	21.40	21.05	20.75	20.50	20.30
9 .5	28.60	27.35	26.20	25.25	24.35	23.60	22.90	22.35	21.80	21.35	20.90	20.55	20.20	19.95	19.50	19.20	18.90	18.70	18.50
9	26.40	25.15	24.05	23.10	22.25	21.50	20.85	20.30	19.80	19.35	18.95	18.60	18.30	18.05	17.65	17.35	17.10	16.90	16.75
8 .5	24.15	22.95	21.90	20.95	20.15	19.40	18.80	18.25	17.80	17.35	17.00	16.65	16.40	16.15	15.80	15.50	15.30	15.10	15.00
8	21.90	20.75	19.75	18.85	18.05	17.35	16.75	16.25	15.80	15.40	15.05	14.75	14.50	14.30	13.95	13.70	13.50	13.35	13.25
7 .5	20.20	19.10	18.15	17.30	16.55	15.85	15.30	14.80	14.35	14.00	13.65	13.35	13.10	12.85	12.55	12.30	12.10	12.00	11.90
7	18.50	17.45	16.55	15.80	15.05	14.40	13.85	13.40	12.95	12.60	12.25	11.95	11.70	11.45	11.15	10.90	10.75	10.65	10.60
6 .5	17.10	16.10	15.20	14.50	13.80	13.20	12.70	12.25	11.85	11.50	11.20	10.90	10.65	10.35	10.20	10.05	9.95	9.90	9.85

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	15.70	14.75	13.90	13.20	12.60	12.05	11.60	11.15	10.80	10.45	10.15	9.85	9.65	9.50	9.25	9.10			
5 .5	14.60	13.70	12.85	12.20	11.60	11.10	10.65	10.25	9.95	9.60	9.35	9.10	8.95	8.80	8.55	8.45			
5	13.50	12.60	11.85	11.20	10.65	10.15	9.75	9.40	9.10	8.80	8.55	8.35	8.25	8.10	7.90	7.80			
4 .5	12.40	11.55	10.80	10.25	9.75	9.30	8.95	8.65	8.40	8.15	7.90	7.75	7.65	7.50	7.35	7.25			
4	11.30	10.50	9.80	9.30	8.85	8.50	8.20	7.95	7.70	7.50	7.30	7.15	7.05	6.95	6.80	6.75			
3 .5	10.35	9.60	9.00	8.50	8.10	7.75	7.50	7.25	7.10	6.90	6.75	6.65	6.55	6.50	6.40	6.35			
3	9.45	8.75	8.20	7.75	7.35	7.05	6.80	6.60	6.50	6.35	6.25	6.15	6.10	6.05	6.00	5.95			
2	7.55	7.00	6.55	6.20	5.90	5.70	5.50	5.30	5.20	5.10	5.05	5.00	4.95	4.95	4.90	4.90			
1 .5	6.15	5.65	5.20	4.90	4.65	4.45	4.25	4.10	4.00	3.95	3.90	3.85	3.80	3.80	3.75	3.75			
1	4.75	4.30	3.90	3.65	3.40	3.20	3.05	2.95	2.85	2.80	2.75	2.70	2.65	2.65	2.60	2.60			



SHAPE B

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
1 0	31.65	30.35	29.20	28.20	27.30	26.50	25.75	25.15	24.60	24.10	23.65	23.25	22.90	22.60	22.15	21.80	21.50	21.25	21.05
9 .5	29.35	28.05	26.95	25.95	25.10	24.30	23.60	23.05	22.50	22.05	21.60	21.25	20.90	20.65	20.20	19.90	19.60	19.40	19.20
9	27.05	25.80	24.70	23.75	22.90	22.15	21.50	20.95	20.45	20.00	19.60	19.25	18.95	18.70	18.30	18.00	17.75	17.55	17.40
8 .5	24.75	23.55	22.50	21.55	20.75	20.00	19.40	18.85	18.40	17.95	17.60	17.25	17.00	16.75	16.40	16.10	15.90	15.70	15.60
8	22.45	21.30	20.30	19.40	18.60	17.90	17.30	16.80	16.35	15.95	15.60	15.30	15.05	14.85	14.50	14.25	14.05	13.90	13.80
7 .5	20.70	19.60	18.65	17.80	17.05	16.35	15.80	15.30	14.85	14.50	14.15	13.85	13.60	13.35	13.05	12.80	12.60	12.50	12.40
7	18.95	17.90	17.00	16.25	15.50	14.85	14.30	13.85	13.40	13.05	12.70	12.40	12.15	11.90	11.60	11.35	11.20	11.10	11.05
6 .5	17.45	16.45	15.50	14.85	14.15	13.55	13.05	12.65	12.25	11.90	11.60	11.30	11.10	10.90	10.60	10.40	10.25	10.15	10.10

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	15.95	15.00	14.15	13.45	12.85	12.30	11.85	11.45	11.10	10.80	10.50	10.25	10.05	9.90	9.65	9.50			
5 .5	14.85	13.90	13.10	12.40	11.85	11.35	10.90	10.50	10.20	9.90	9.65	9.40	9.25	9.10	8.85	8.75			
5	13.75	12.85	12.05	11.40	10.85	10.40	10.00	9.65	9.35	9.05	8.80	8.60	8.45	8.30	8.10	8.00			
4 .5	12.60	11.75	11.00	10.40	9.90	9.50	9.15	8.85	8.60	8.35	8.10	7.95	7.80	7.70	7.50	7.45			
4	11.50	10.70	10.00	9.45	9.00	8.65	8.35	8.10	7.85	7.65	7.45	7.30	7.20	7.10	6.95	6.90			
3 .5	10.55	9.80	9.20	8.70	8.30	7.95	7.70	7.45	7.25	7.10	6.95	6.85	6.75	6.70	6.60	6.55			
3	9.65	8.95	8.40	7.95	7.60	7.30	7.05	6.85	6.70	6.60	6.50	6.40	6.35	6.30	6.25	6.20			
2	7.75	7.20	6.75	6.40	6.10	5.90	5.70	5.50	5.40	5.30	5.25	5.20	5.15	5.15	5.10	5.10			
1 .5	6.25	5.75	5.35	5.05	4.75	4.55	4.40	4.25	4.15	4.05	4.00	3.95	3.90	3.90	3.85	3.85			
1	4.80	4.35	3.95	3.70	3.45	3.25	3.10	3.00	2.90	2.85	2.80	2.75	2.70	2.70	2.65	2.65			

ISSUED 5/1970

NOTE: The cost factors are shown in DOLLARS per square foot of first floor areas NOT including Basements.

For "D" Class construction fully enclosed with Brick Veneer, use "C" Class cost factors.

SHAPE C

CONSTRUCTION : CLASS D

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
10	32.30	31.00	29.85	28.85	27.95	27.15	26.45	25.85	25.30	24.80	24.35	23.95	23.60	23.30	22.85	22.50	22.20	21.95	21.75
9.5	30.00	28.70	27.60	26.60	25.75	24.95	24.30	23.70	23.20	22.70	22.30	21.90	21.60	21.30	20.90	20.55	20.30	20.05	19.90
9	27.70	26.45	25.35	24.40	23.55	22.80	22.15	21.60	21.10	20.65	20.25	19.90	19.60	19.35	18.95	18.65	18.40	18.20	18.05
8.5	25.35	24.15	23.10	22.20	21.35	20.65	20.00	19.50	19.00	18.60	18.20	17.90	17.60	17.40	17.00	16.75	16.50	16.35	16.20
8	23.05	21.90	20.90	20.00	19.20	18.50	17.90	17.40	16.95	16.55	16.20	15.90	15.65	15.45	15.10	14.85	14.65	14.50	14.40
7.5	21.25	20.15	19.20	18.40	17.60	16.95	16.35	15.90	15.45	15.05	14.70	14.40	14.15	13.95	13.60	13.35	13.20	13.05	13.00
7	19.50	18.45	17.55	16.80	16.05	15.40	14.85	14.40	13.95	13.60	13.25	12.95	12.70	12.45	12.15	11.90	11.75	11.65	11.60
6.5	17.90	16.90	16.00	15.30	14.60	14.00	13.50	13.10	12.70	12.35	12.05	11.75	11.55	11.35	11.05	10.85	10.70	10.60	10.55

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000		
6	16.30	15.35	14.50	13.80	13.20	12.65	12.20	11.80	11.45	11.15	10.85	10.60	10.40	10.25	10.00	9.85		
5.5	15.15	14.25	13.40	12.75	12.15	11.65	11.25	10.85	10.55	10.25	9.95	9.75	9.55	9.40	9.20	9.05		
5	14.05	13.15	12.35	11.70	11.15	10.70	10.30	9.95	9.65	9.35	9.10	8.90	8.75	8.60	8.40	8.30		
4.5	12.90	12.05	11.30	10.70	10.20	9.80	9.45	9.15	8.85	8.60	8.40	8.20	8.10	7.95	7.80	7.70		
4	11.75	10.95	10.25	9.70	9.25	8.90	8.60	8.35	8.10	7.90	7.70	7.55	7.45	7.35	7.20	7.15		
3.5	10.80	10.05	9.40	8.90	8.50	8.20	7.90	7.70	7.50	7.35	7.20	7.05	7.00	6.90	6.80	6.75		
3	9.85	9.15	8.60	8.15	7.80	7.50	7.25	7.05	6.90	6.80	6.70	6.60	6.55	6.50	6.45	6.40		
2	7.90	7.35	6.90	6.55	6.25	6.05	5.85	5.65	5.55	5.45	5.40	5.35	5.30	5.30	5.25	5.25		
1.5	6.35	5.85	5.45	5.15	4.85	4.65	4.50	4.35	4.25	4.15	4.10	4.05	4.00	4.00	3.95	3.95		
1	4.85	4.40	4.00	3.75	3.50	3.30	3.15	3.05	2.95	2.90	2.85	2.80	2.75	2.75	2.70	2.70		



SHAPE D

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
10	33.05	31.75	30.60	29.60	28.70	27.90	27.20	26.60	26.05	25.55	25.10	24.70	24.35	24.05	23.60	23.25	22.95	22.70	22.50
9.5	30.65	29.40	28.25	27.30	26.40	25.65	24.95	24.40	23.85	23.40	22.95	22.60	22.25	22.00	21.55	21.25	20.95	20.75	20.55
9	28.30	27.05	25.95	25.00	24.15	23.40	22.75	22.20	21.70	21.25	20.85	20.50	20.20	19.95	19.55	19.25	19.00	18.80	18.65
8.5	25.95	24.75	23.70	22.75	21.95	21.20	20.60	20.05	19.60	19.15	18.80	18.45	18.20	17.95	17.60	17.30	17.10	16.90	16.80
8	23.60	22.45	21.45	20.55	19.75	19.05	18.45	17.95	17.50	17.10	16.75	16.45	16.20	16.00	15.65	15.40	15.20	15.05	14.95
7.5	21.75	20.65	19.70	18.85	18.10	17.40	16.85	16.35	15.90	15.55	15.20	14.90	14.65	14.40	14.10	13.85	13.65	13.55	13.45
7	19.90	18.85	17.95	17.20	16.45	15.80	15.25	14.80	14.35	14.00	13.65	13.35	13.10	12.85	12.55	12.30	12.15	12.05	12.00
6.5	18.30	17.30	16.40	15.70	15.00	14.40	13.90	13.50	13.10	12.75	12.45	12.15	11.95	11.75	11.45	11.20	11.00	10.85	10.75

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000		
6	16.70	15.75	14.90	14.20	13.60	13.05	12.60	12.20	11.85	11.55	11.25	11.00	10.80	10.65	10.40	10.25		
5.5	15.50	14.60	13.75	13.10	12.50	12.00	11.60	11.20	10.90	10.60	10.30	10.10	9.90	9.75	9.55	9.40		
5	14.35	13.45	12.65	12.00	11.45	11.00	10.60	10.25	9.95	9.65	9.40	9.20	9.05	8.90	8.70	8.60		
4.5	13.15	12.30	11.55	10.95	10.45	10.05	9.70	9.40	9.10	8.85	8.65	8.45	8.35	8.20	8.05	7.95		
4	11.95	11.15	10.45	9.90	9.45	9.10	8.80	8.55	8.30	8.10	7.90	7.75	7.65	7.55	7.40	7.35		
3.5	11.00	10.25	9.60	9.10	8.70	8.40	8.10	7.90	7.70	7.55	7.40	7.25	7.20	7.10	7.00	6.95		
3	10.05	9.35	8.80	8.35	8.00	7.70	7.45	7.25	7.10	7.00	6.90	6.80	6.75	6.70	6.65	6.60		
2	8.00	7.45	7.00	6.65	6.35	6.15	5.95	5.75	5.65	5.55	5.30	5.45	5.40	5.40	5.35	5.35		
1.5	6.50	6.00	5.55	5.25	4.95	4.80	4.60	4.45	4.35	4.30	4.25	4.20	4.15	4.15	4.10	4.10		
1	5.00	4.55	4.15	3.90	3.65	3.45	3.30	3.20	3.10	3.05	3.00	2.95	2.90	2.90	2.85	2.85		

ISSUED 5/1970 (REVISED: JAN. 1972)

NOTE: The cost factors are shown in DOLLARS per square foot of first floor areas NOT including Basements.

For "D" Class construction fully enclosed with Brick Veneer, use "C" Class cost factors.

SINGLE RESIDENTIAL

SECTION 2 PAGE 3

BUILDING COST FACTORS

BASE YEAR 1969

SHAPE A

CONSTRUCTION CLASS C

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
10	31.95	30.65	29.50	28.50	27.60	26.80	26.10	25.50	24.95	24.45	24.00	23.60	23.25	22.95	22.50	22.15	21.85	21.60	21.40
9.5	29.65	28.40	27.25	26.30	25.40	24.65	23.95	23.40	22.85	22.40	21.95	21.60	21.25	21.00	20.55	20.25	19.95	19.75	19.55
9	27.40	26.15	25.05	24.10	23.25	22.50	21.85	21.30	20.80	20.35	19.95	19.60	19.30	19.05	18.65	18.35	18.10	17.90	17.75
8.5	25.15	23.95	22.90	21.95	21.15	20.40	19.80	19.25	18.80	18.35	18.00	17.65	17.40	17.15	16.80	16.50	16.30	16.10	16.00
8	22.90	21.75	20.75	19.85	19.05	18.35	17.75	17.25	16.80	16.40	16.05	15.75	15.50	15.30	14.95	14.70	14.50	14.35	14.25
7.5	21.15	20.05	19.10	18.30	17.50	16.85	16.25	15.80	15.35	14.95	14.60	14.30	14.05	13.85	13.50	13.25	13.10	12.95	12.90
7	19.45	18.40	17.50	16.75	16.00	15.35	14.80	14.35	13.90	13.55	13.20	12.90	12.65	12.40	12.10	11.85	11.70	11.60	11.55
6.5	17.95	16.95	16.10	15.35	14.65	14.05	13.55	13.15	12.75	12.40	12.10	11.80	11.60	11.40	11.10	10.90	10.75	10.65	10.60

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	16.45	15.50	14.65	13.95	13.35	12.80	12.35	11.95	11.60	11.30	11.00	10.75	10.55	10.40	10.15	10.00			
5.5	15.25	14.30	13.50	12.80	12.25	11.75	11.30	10.95	10.65	10.35	10.05	9.80	9.65	9.50	9.25	9.15			
5	14.05	13.15	12.35	11.70	11.15	10.70	10.30	9.95	9.65	9.35	9.10	8.90	8.75	8.60	8.40	8.30			
4.5	12.85	12.00	11.25	10.65	10.15	9.75	9.40	9.10	8.85	8.60	8.35	8.20	8.05	7.95	7.75	7.70			
4	11.70	10.90	10.20	9.65	9.20	8.85	8.55	8.30	8.05	7.85	7.65	7.50	7.40	7.30	7.15	7.10			
3.5	10.65	9.90	9.30	8.80	8.40	8.05	7.80	7.55	7.35	7.20	7.05	6.95	6.85	6.80	6.65	6.60			
3	9.65	8.95	8.40	7.95	7.60	7.30	7.05	6.85	6.70	6.60	6.50	6.40	6.35	6.30	6.20	6.15			



SHAPE B

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
10	32.60	31.30	30.15	29.15	28.25	27.45	26.75	26.15	25.60	25.10	24.65	24.25	23.90	23.60	23.15	22.80	22.50	22.25	22.05
9.5	30.30	29.05	27.90	26.95	26.05	25.30	24.60	24.05	23.50	23.05	22.60	22.25	21.90	21.65	21.20	20.90	20.60	20.40	20.20
9	28.05	26.80	25.70	24.75	23.90	23.15	22.50	21.95	21.45	21.00	20.60	20.25	19.95	19.70	19.30	19.00	18.75	18.55	18.40
8.5	25.75	24.55	23.50	22.60	21.75	21.05	20.40	19.90	19.40	19.00	18.60	18.30	18.00	17.80	17.40	17.15	16.90	16.75	16.60
8	23.50	22.35	21.35	20.45	19.65	18.95	18.35	17.85	17.40	17.00	16.65	16.35	16.10	15.90	15.55	15.30	15.10	14.95	14.85
7.5	21.70	20.60	19.65	18.85	18.05	17.40	16.80	16.35	15.90	15.50	15.15	14.85	14.60	14.40	14.05	13.80	13.65	13.50	13.45
7	19.95	18.90	18.00	17.25	16.50	15.85	15.30	14.85	14.40	14.05	13.70	13.40	13.15	12.90	12.60	12.35	12.20	12.10	12.05
6.5	18.35	17.30	16.50	15.75	15.10	14.50	14.00	13.55	13.15	12.85	12.50	12.25	12.00	11.80	11.55	11.35	11.20	11.10	11.05

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	16.80	15.85	15.00	14.30	13.70	13.15	12.70	12.30	11.95	11.65	11.35	11.10	10.90	10.75	10.50	10.35			
5.5	15.55	14.65	13.80	13.15	12.50	12.05	11.65	11.25	10.95	10.65	10.35	10.15	9.95	9.80	9.60	9.45			
5	14.35	13.45	12.65	12.00	11.45	11.00	10.60	10.25	9.95	9.65	9.40	9.20	9.05	8.90	8.70	8.60			
4.5	13.10	12.25	11.50	10.90	10.40	10.00	9.65	9.35	9.10	8.85	8.60	8.45	8.30	8.20	8.00	7.95			
4	11.90	11.10	10.40	9.85	9.40	9.05	8.75	8.50	8.25	8.05	7.85	7.70	7.60	7.50	7.35	7.30			
3.5	10.85	10.10	9.45	8.95	8.55	8.25	7.95	7.75	7.55	7.40	7.25	7.10	7.05	6.95	6.85	6.80			
3	9.80	9.10	8.55	8.10	7.75	7.45	7.20	7.00	6.85	6.75	6.65	6.55	6.50	6.45	6.35	6.30			

ISSUED 5/1970

(Dollars per Square Foot of First Floor Areas NOT Including Basements)

SINGLE RESIDENTIAL

BASE YEAR 1969

BUILDING COST FACTORS

SHAPE C

CONSTRUCTION : CLASS C

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
1 0	33.35	32.05	30.90	29.90	29.00	28.20	27.50	26.90	26.35	25.85	25.40	25.00	24.65	24.35	23.90	23.55	23.25	23.00	22.80
9 . 5	31.05	29.75	28.65	27.65	26.80	26.00	25.35	24.75	24.25	23.75	23.35	22.95	22.65	22.35	21.95	21.60	21.35	21.10	20.95
9	28.75	27.50	26.40	25.45	24.60	23.85	23.20	22.65	22.15	21.70	21.30	20.95	20.65	20.40	20.00	19.70	19.45	19.25	19.10
8 . 5	26.45	25.25	24.20	23.30	22.45	21.70	21.10	20.55	20.10	19.65	19.30	18.95	18.70	18.45	18.10	17.85	17.60	17.40	17.30
8	24.15	23.00	22.00	21.10	20.30	19.60	19.00	18.50	18.05	17.65	17.30	17.00	16.75	16.55	16.20	15.95	15.75	15.60	15.50
7 . 5	22.30	21.20	20.25	19.40	18.65	17.95	17.40	16.90	16.45	16.10	15.75	15.45	15.20	14.95	14.65	14.40	14.20	14.10	14.00
7	20.45	19.40	18.50	17.75	17.00	16.35	15.80	15.35	14.90	14.55	14.20	13.90	13.65	13.40	13.10	12.85	12.70	12.60	12.55
6 . 5	18.80	17.80	16.95	16.20	15.55	14.95	14.45	14.00	13.60	13.30	12.95	12.70	12.45	12.25	12.00	11.80	11.65	11.55	11.50

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	17.20	16.25	15.40	14.70	14.10	13.55	13.10	12.70	12.35	12.05	11.75	11.50	11.30	11.15	10.90	10.75			
5 . 5	15.95	15.00	14.20	13.50	12.95	12.45	12.00	11.65	11.30	11.00	10.75	10.50	10.35	10.20	9.95	9.85			
5	14.70	13.80	13.00	12.35	11.80	11.35	10.95	10.60	10.30	10.00	9.75	9.55	9.40	9.25	9.05	8.95			
4 . 5	13.45	12.60	11.85	11.25	10.75	10.35	10.00	9.70	9.40	9.15	8.95	8.75	8.65	8.50	8.35	8.25			
4	12.20	11.40	10.70	10.15	9.70	9.35	9.05	8.80	8.55	8.35	8.15	8.00	7.90	7.80	7.65	7.60			
3 . 5	11.10	10.35	9.75	9.25	8.85	8.50	8.25	8.00	7.80	7.65	7.50	7.40	7.30	7.25	7.10	7.05			
3	10.05	9.35	8.80	8.35	8.00	7.70	7.45	7.25	7.10	7.00	6.90	6.80	6.75	6.70	6.60	6.55			



SHAPE D

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
1 0	34.25	32.95	31.80	30.80	29.90	29.10	28.40	27.80	27.25	26.75	26.30	25.90	25.55	25.25	24.80	24.45	24.15	23.90	23.70
9 . 5	31.85	30.60	29.45	28.50	27.60	26.85	26.15	25.60	25.05	24.60	24.15	23.80	23.45	23.20	22.75	22.45	22.15	21.95	21.75
9	29.50	28.25	27.15	26.20	25.35	24.60	23.95	23.40	22.90	22.45	22.05	21.70	21.40	21.15	20.75	20.45	20.20	20.00	19.85
8 . 5	27.15	25.95	24.90	23.95	23.15	22.40	21.80	21.25	20.80	20.35	20.00	19.65	19.40	19.15	18.80	18.50	18.30	18.10	18.00
8	24.80	23.65	22.65	21.75	20.95	20.25	19.65	19.15	18.70	18.30	17.95	17.65	17.40	17.20	16.85	16.60	16.40	16.25	16.15
7 . 5	22.85	21.75	20.80	20.00	19.20	18.55	17.95	17.50	17.05	16.65	16.30	16.00	15.75	15.55	15.20	14.95	14.80	14.65	14.60
7	20.95	19.90	19.00	18.25	17.50	16.85	16.30	15.85	15.40	15.05	14.70	14.40	14.15	13.90	13.60	13.35	13.20	13.10	13.05
6 . 5	19.25	18.25	17.40	16.65	16.00	15.40	14.90	14.45	14.05	13.75	13.40	13.15	12.90	12.70	12.45	12.25	12.10	12.00	11.95

AREA CLASS	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000			
6	17.60	16.65	15.80	15.10	14.50	13.95	13.50	13.10	12.75	12.45	12.15	11.90	11.70	11.55	11.30	11.15			
5 . 5	16.30	15.40	14.55	13.90	13.30	12.80	12.40	12.00	11.70	11.40	11.10	10.90	10.70	10.55	10.35	10.20			
5	15.05	14.15	13.35	12.70	12.15	11.70	11.30	10.95	10.65	10.35	10.10	9.90	9.75	9.60	9.40	9.30			
4 . 5	13.75	12.90	12.15	11.55	11.05	10.65	10.30	10.00	9.70	9.45	9.25	9.05	8.95	8.80	8.65	8.55			
4	12.45	11.65	10.95	10.40	9.95	9.60	9.30	9.05	8.80	8.60	8.40	8.25	8.15	8.05	7.90	7.85			
3 . 5	11.35	10.60	10.00	9.50	9.10	8.75	8.50	8.25	8.05	7.90	7.75	7.65	7.55	7.50	7.35	7.30			
3	10.30	9.60	9.05	8.60	8.25	7.95	7.70	7.50	7.35	7.25	7.15	7.05	7.00	6.95	6.85	6.80			

ISSUED 5/1970

(Dollars per Square Foot of First Floor Areas NOT Including Basements)

METHOD TO DETERMINE THE R.C.N. OF MULTIPLE RESIDENTIAL

Initially, the design, character of construction and quality rating of the structures must be determined. No shape adjustment is necessary. In calculating the size of the structure, the area of each floor should be dealt with separately. Area computations, based on exterior measurements, should include the apartment units, manager's unit, utility rooms, interior hallways and stairways, etc. except where found in basements.

An average unit area per floor is calculated by dividing the total area of each floor by the number of units on that floor.

Side by Side square foot cost factors should be used when the units have common side walls. Back to Back square foot cost factors should be used when the units have common side walls and a common back wall.

In computing the replacement cost new of the first storey, the appropriate "down" square foot costs should be used. When a second storey is to be costed, the "up" rates should be applied against this area. In the event the second storey has a larger area than the first floor, the "down" rate should be applied against the second storey area and the "up" rate against the first floor. This inversion of the rates applied to each floor takes into consideration the additional costs of foundation and roof structure required to support and cover the larger second storey area.

If three or more storeys are involved, an additional and cumulative 2% per storey should be added to the "up" rate. This procedure assumes an equal quality of construction and finish for each floor.

The method of applying the area adjustment is described in Section 2, Pages 7 and 9. To determine the total cost new of the building (before heating and additives), the final adjusted square foot costs should be multiplied by the total area of each corresponding floor.

When first and second storeys comprise a single living unit, e.g. semi-detached structures, terrace or row housing, calculate the unit value of the ground floor area as indicated above. Then follow the procedure outlined in Section 6, Page 1, applying the correct percentages to the "down" rate, to establish the second storey rate.

The square foot cost factors for multiple residential, do not include basements, heating or air conditioning equipment, fireplaces, porches, balconies, outside stairways or yard improvements. These additives should be calculated using methods outlined in Section 3.

MULTIPLE RESIDENTIAL
BUILDING COST FACTORS

SIDE BY SIDE

CONSTRUCTION : CLASS D

CLASS	3	4	5	6	7	8	9	10
BASIC AREA	400	500	600	700	800	1000	1200	1500
2 UNITS UP	6.20	6.95	7.80	8.80	9.95	11.35	12.95	14.95
2 UNITS DOWN	7.75	8.70	9.80	11.05	12.40	14.15	16.20	18.65
3 UNITS UP	6.00	6.70	7.55	8.50	9.70	11.05	12.70	14.65
3 UNITS DOWN	7.50	8.40	9.50	10.70	12.15	13.80	15.90	18.30
4 UNITS UP	5.80	6.55	7.40	8.35	9.50	10.80	12.50	14.40
4 UNITS DOWN	7.25	8.20	9.25	10.45	11.90	13.55	15.60	18.00
5 UNITS UP	5.70	6.40	7.25	8.20	9.30	10.60	12.30	14.20
5 UNITS DOWN	7.10	8.00	9.05	10.25	11.65	13.30	15.35	17.75
6 UNITS UP	5.60	6.30	7.10	8.05	9.15	10.45	12.10	14.00
6 UNITS DOWN	6.95	7.85	8.90	10.05	11.45	13.10	15.10	17.50
7 UNITS UP	5.50	6.20	7.00	7.90	9.00	10.30	11.90	13.85
7 UNITS DOWN	6.80	7.70	8.75	9.90	11.25	12.90	14.90	17.30
8 UNITS UP	5.40	6.10	6.90	7.80	8.90	10.20	11.75	13.70
8 UNITS DOWN	6.70	7.60	8.65	9.80	11.10	12.70	14.70	17.10
12 UNITS UP	5.15	5.80	6.55	7.45	8.45	9.70	11.30	13.10
12 UNITS DOWN	6.40	7.25	8.25	9.30	10.55	12.15	14.10	16.40
16 UNITS UP	5.10	5.65	6.35	7.25	8.20	9.50	10.90	12.80
16 UNITS DOWN	6.30	7.10	8.00	9.05	10.25	11.80	13.70	15.95



BACK TO BACK

CLASS	3	4	5	6	7	8	9	10
BASIC AREA	400	500	600	700	800	1000	1200	1500
2 UNITS UP	6.05	6.80	7.70	8.65	9.80	11.15	12.85	14.90
2 UNITS DOWN	7.55	8.45	9.60	10.80	12.25	14.00	16.10	18.60
3 UNITS UP	5.80	6.60	7.45	8.40	9.55	10.90	12.60	14.60
3 UNITS DOWN	7.25	8.20	9.30	10.50	11.95	13.60	15.70	18.25
4 UNITS UP	5.65	6.40	7.25	8.20	9.30	10.70	12.40	14.35
4 UNITS DOWN	7.05	8.00	9.05	10.25	11.65	13.30	15.40	17.95
5 UNITS UP	5.50	6.25	7.10	8.05	9.10	10.50	12.20	14.15
5 UNITS DOWN	6.90	7.80	8.85	10.00	11.40	13.10	15.15	17.70
6 UNITS UP	5.40	6.10	6.95	7.90	8.95	10.30	12.00	13.95
6 UNITS DOWN	6.75	7.65	8.65	9.85	11.20	12.90	14.95	17.45
7 UNITS UP	5.30	6.00	6.85	7.75	8.85	10.15	11.80	13.75
7 UNITS DOWN	6.65	7.50	8.50	9.70	11.05	12.70	14.75	17.25
8 UNITS UP	5.20	5.90	6.75	7.60	8.75	10.00	11.65	13.60
8 UNITS DOWN	6.55	7.40	8.40	9.55	10.90	12.55	14.60	17.05
12 UNITS UP	5.00	5.65	6.35	7.25	8.30	9.55	11.15	13.10
12 UNITS DOWN	6.25	7.05	8.00	9.05	10.40	11.95	14.00	16.30
16 UNITS UP	4.90	5.50	6.25	7.10	8.05	9.25	10.80	12.70
16 UNITS DOWN	6.10	6.90	7.80	8.80	10.10	11.60	13.50	15.90

ISSUED 5/1970

NOTE: The cost factors are shown in DOLLARS per square foot of first floor areas NOT including Basements.

For "D" Class construction fully enclosed with Brick Veneer, use "C" Class cost factors.

MULTIPLE RESIDENCE AREA ADJUSTMENT TABLE

CLASS	AREA											
		150	200	250	300	350	400	500	600	700	800	
3	AREA											
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.90	.89	
4	AREA	250	300	350	400	450	500	600	700	800	900	
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.90	.89	
5	AREA	250	300	350	400	500	600	700	800	900	1000	1100
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.92	.91	.90
6	AREA	250	300	400	500	600	700	800	900	1000	1100	1200
	FACTOR	1.28	1.21	1.15	1.10	1.05	1.00	.96	.93	.92	.91	.90
7	AREA	300	400	500	600	700	800	900	1000	1100	1200	1300
	FACTOR	1.30	1.21	1.14	1.08	1.04	1.00	.96	.94	.93	.92	.91
8	AREA	400	500	600	700	800	900	1000	1100	1200	1300	1400
	FACTOR	1.30	1.21	1.15	1.10	1.06	1.03	1.00	.97	.95	.94	.93
9	AREA	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
	FACTOR	1.21	1.16	1.12	1.08	1.05	1.02	1.00	.97	.96	.94	.93
10	AREA	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400
	FACTOR	1.15	1.11	1.08	1.06	1.04	1.02	1.00	.98	.96	.94	.92

AREA MODIFICATION FOR MULTIPLE RESIDENCE

In determining the area adjustment modifier, each floor must be calculated separately. The square foot cost factors shown in the tables are based on specific areas for each quality class. Adjustment must be made for any variance from the basic average unit area as prescribed for each quality class.

The procedure for applying the area adjustment table is as follows:

The appropriate basic cost factor is selected after the character of construction, quality rating, average unit area per floor and design of construction have been determined. The area modifier is found by comparing the actual average unit size to the comparable size shown in the table for a specific quality class. This area modifier is applied to the initial basic cost factor. The adjusted rate is then applied to the total square foot area for each particular floor. These costs plus any additive charges, will produce the replacement cost new of the structure.

MULTIPLE RESIDENTIAL
BUILDING COST FACTORS

SIDE BY SIDE

CONSTRUCTION : CLASS C

CLASS	3	4	5	6	7	8	9	10
BASIC AREA	400	500	600	700	800	1000	1200	1500
2 UNITS UP	6.65	7.45	8.40	9.45	10.70	12.20	13.90	15.95
2 UNITS DOWN	8.25	9.30	10.50	11.75	13.30	15.20	17.40	19.90
3 UNITS UP	6.40	7.25	8.15	9.20	10.45	11.90	13.60	15.65
3 UNITS DOWN	8.05	9.05	10.20	11.45	13.00	14.90	17.05	19.55
4 UNITS UP	6.25	7.05	8.00	9.00	10.20	11.65	13.40	15.40
4 UNITS DOWN	7.85	8.85	9.95	11.20	12.75	14.60	16.75	19.25
5 UNITS UP	6.10	6.90	7.85	8.80	10.00	11.45	13.20	15.20
5 UNITS DOWN	7.70	8.65	9.75	11.00	12.55	14.35	16.50	19.00
6 UNITS UP	6.00	6.75	7.70	8.65	9.85	11.30	13.00	15.00
6 UNITS DOWN	7.55	8.50	9.55	10.80	12.35	14.15	16.25	18.75
7 UNITS UP	5.90	6.65	7.55	8.50	9.70	11.15	12.85	14.80
7 UNITS DOWN	7.40	8.35	9.40	10.65	12.20	13.95	16.05	18.55
8 UNITS UP	5.80	6.55	7.45	8.40	9.60	11.05	12.70	14.65
8 UNITS DOWN	7.30	8.20	9.30	10.50	12.05	13.80	15.90	18.35
12 UNITS UP	5.60	6.30	7.10	8.05	9.20	10.55	12.20	14.10
12 UNITS DOWN	7.00	7.85	8.90	10.00	11.45	13.20	15.25	17.65
16 UNITS UP	5.50	6.20	6.95	7.85	8.95	10.25	11.90	13.75
16 UNITS DOWN	6.90	7.75	8.70	9.80	11.15	12.85	14.80	17.15



BACK TO BACK

CLASS	3	4	5	6	7	8	9	10
BASIC AREA	400	500	600	700	800	1000	1200	1500
2 UNITS UP	6.55	7.30	8.30	9.30	10.55	12.05	13.80	15.85
2 UNITS DOWN	8.15	9.20	10.30	11.65	13.20	15.00	17.25	19.80
3 UNITS UP	6.30	7.10	8.05	9.05	10.30	11.80	13.50	15.55
3 UNITS DOWN	7.90	8.90	10.05	11.35	12.90	14.70	16.90	19.45
4 UNITS UP	6.10	6.95	7.85	8.85	10.10	11.60	13.25	15.30
4 UNITS DOWN	7.70	8.70	9.80	11.10	12.60	14.45	16.60	19.15
5 UNITS UP	5.95	6.80	7.70	8.65	9.90	11.40	13.05	15.10
5 UNITS DOWN	7.55	8.50	9.60	10.85	12.40	14.20	16.35	18.85
6 UNITS UP	5.85	6.65	7.55	8.50	9.75	11.20	12.90	14.90
6 UNITS DOWN	7.40	8.35	9.45	10.65	12.20	14.00	16.10	18.60
7 UNITS UP	5.75	6.55	7.40	8.40	9.60	11.05	12.75	14.70
7 UNITS DOWN	7.25	8.20	9.30	10.50	12.05	13.80	15.90	18.40
8 UNITS UP	5.70	6.50	7.30	8.30	9.50	10.90	12.60	14.55
8 UNITS DOWN	7.15	8.10	9.20	10.40	11.90	13.60	15.70	18.20
12 UNITS UP	5.50	6.20	7.00	7.90	9.05	10.45	12.05	14.00
12 UNITS DOWN	6.85	7.75	8.75	9.90	11.35	13.10	15.10	17.50
16 UNITS UP	5.40	6.05	6.85	7.75	8.80	10.15	11.75	13.60
16 UNITS DOWN	6.80	7.60	8.60	9.65	11.05	12.70	14.70	17.05

MULTIPLE RESIDENCE AREA ADJUSTMENT TABLE

CLASS												
3	AREA	150	200	250	300	350	400	500	600	700	800	
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.90	.89	
4	AREA	250	300	350	400	450	500	600	700	800	900	
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.90	.89	
5	AREA	250	300	350	400	500	600	700	800	900	1000	1100
	FACTOR	1.28	1.21	1.17	1.12	1.05	1.00	.96	.93	.92	.91	.90
6	AREA	250	300	400	500	600	700	800	900	1000	1100	1200
	FACTOR	1.28	1.21	1.15	1.10	1.05	1.00	.96	.93	.92	.91	.90
7	AREA	300	400	500	600	700	800	900	1000	1100	1200	1300
	FACTOR	1.30	1.21	1.14	1.08	1.04	1.00	.96	.94	.93	.92	.91
8	AREA	400	500	600	700	800	900	1000	1100	1200	1300	1400
	FACTOR	1.30	1.21	1.15	1.10	1.06	1.03	1.00	.97	.95	.94	.93
9	AREA	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
	FACTOR	1.21	1.16	1.12	1.08	1.05	1.02	1.00	.97	.96	.94	.93
10	AREA	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400
	FACTOR	1.15	1.11	1.08	1.06	1.04	1.02	1.00	.98	.96	.94	.92

AREA MODIFICATION FOR MULTIPLE RESIDENCE

In determining the area adjustment modifier, each floor must be calculated separately. The square foot cost factors shown in the tables are based on specific areas for each quality class. Adjustment must be made for any variance from the basic average unit area as prescribed for each quality class. The procedure for applying the area adjustment table is as follows:

The appropriate basic cost factor is selected after the character of construction, quality rating, average unit area per floor and design of construction have been determined. The area modifier is found by comparing the actual average unit size to the comparable size shown in the table for a specific quality class. This area modifier is applied to the initial basic cost factor. The adjusted rate is then applied to the total square foot area for each particular floor. These costs plus any additive charges, will produce the replacement cost new of the structure.

BASEMENT COST FACTORS

BASIC HEIGHT-8'

USE TYPE : SINGLE RESIDENTIAL

CLASS	SQUARE FOOT AREA															
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2400	2800	3200
10			2.41	2.29	2.18	2.08	2.00	1.93	1.87	1.83	1.80	1.77	1.76	1.74	1.73	1.72
9.5			2.20	2.08	1.98	1.89	1.82	1.75	1.70	1.66	1.64	1.61	1.60	1.59	1.58	1.57
9			2.11	1.99	1.88	1.79	1.71	1.64	1.58	1.53	1.50	1.48	1.46	1.45	1.44	1.43
8.5			1.94	1.82	1.72	1.63	1.55	1.49	1.44	1.39	1.37	1.35	1.34	1.33	1.31	1.30
8	1.89	1.77	1.66	1.56	1.47	1.40	1.35	1.30	1.26	1.24	1.23	1.22	1.21	1.19	1.18	1.17
7.5	1.73	1.62	1.51	1.43	1.35	1.28	1.23	1.19	1.16	1.14	1.13	1.12	1.11	1.09	1.08	
7	1.57	1.47	1.38	1.30	1.23	1.17	1.12	1.09	1.06	1.05	1.04	1.03	1.02	1.00	.99	



CLASS	SQUARE FOOT AREA															
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000
6.5				1.46	1.36	1.28	1.20	1.14	1.09	1.04	1.02	.99	.98	.97	.96	.95
6			1.46	1.35	1.26	1.18	1.11	1.05	1.01	.97	.95	.93	.92	.91	.90	.89
5.5			1.35	1.25	1.16	1.08	1.02	.97	.93	.90	.88	.87	.86	.85	.83	.82
5		1.35	1.24	1.15	1.06	.99	.94	.89	.85	.83	.82	.81	.80	.79	.77	.76
4.5		1.23	1.13	1.05	.97	.90	.85	.81	.78	.76	.75	.74	.73	.72	.70	
4	1.20	1.11	1.03	.95	.88	.82	.77	.74	.71	.70	.69	.68	.67	.66	.64	

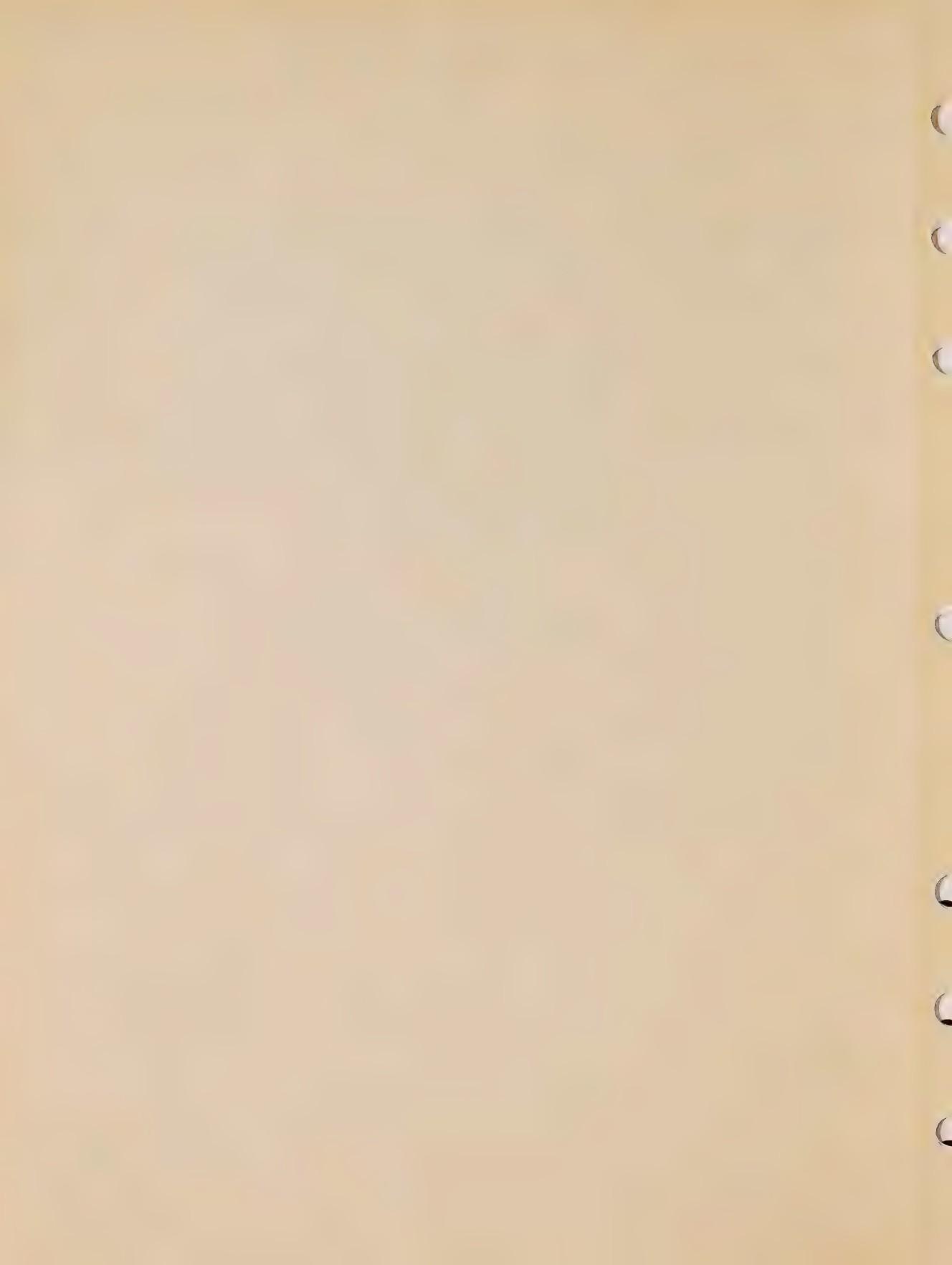
Height Adjustment - 10% for each foot of variation in height.

Shape Adjustment - "B" shape add 3% to above cost factor.

"C" shape add 7% " " " "

"D" shape add 10% " " " "

NOTE: Basement cost factors do not include finishing costs.The cost factors include the cost of staircases, electrical wiring
and concrete floors.



RESIDENTIAL BASEMENT ADDITIVES

UNFINISHED BASEMENTS:

The basement cost factors (Section 2, Page 10) are based on an average height of 8 feet, the measurement being taken from the bottom of the floor slab to the bottom of the first storey floor joists.

To determine the basement cost factor the total excavated area below the first storey living area, regardless of height should be taken, and the basic cost factor applied with the necessary height adjustments as required.

CRAWL SPACE: When basement height does not exceed 4 feet cost the floor structure only, using the following rates.

Type of Floor Slab	Cost per sq. ft.
3" Concrete	\$ 0.35
4" Concrete	0.40

FINISHED BASEMENT: (Additive to the Unfinished Basement)

Finished basements used in conjunction with the first storey living area should be classified using the specifications, (Section 3, Page 2) and rated from the Cost schedules (Section 3, Page 4), based on the actual finished area.

BASEMENT APARTMENTS: (Additive to the Unfinished Basement)

Basement apartments should be classified using the specifications (Section 3, Page 3) and rated from the cost schedules (Section 3, Page 4) based on the actual finished area.

BASEMENT RECREATION ROOMS: (Additive to the Unfinished Basement)

Basement recreation rooms should be classified using specifications (Section 3, Page 5) and rated from Cost schedules on that same page based on the actual finished area.

BASEMENT GARAGES: - (Pertaining to detached and semi-detached dwellings)

The following unit cost range takes into account the costs of an additional unfinished masonry wall, floor reinforcing, ceiling insulation and covering, overhead door and hardware.

Single Garage Cost - \$250. to \$325.
Double Garage Cost - \$325. to \$425.

BASEMENT GARAGE ADDITIVES:

	Cost Per Sq. Ft. of Floor Area
Drywall or Plaster, unpainted	\$ 0.60
Rough Plaster	\$ 0.35

FINISHED BASEMENTS
(USED IN CONJUNCTION WITH FIRST FLOOR LIVING AREA)

CLASS COMPONENTS	3	4	5	6
FLOOR FINISH	Linoleum or asphalt tile on concrete	Vinyl asbestos tile on concrete or equiv.	Parquet flooring on concrete or equiv.	Built up hardwood floor or concrete with vapour barrier and sub flooring.
INTERIOR FINISH	Wallboard or equiv. on walls and ceiling. Minimum number of low cost partitions.	Drywall or average quality panelling on walls; average quality acoustic tile on ceiling. Few average quality partitions.	Good quality plaster or panelled walls; good quality acoustic tile on ceiling. Cut up interior with good quality partitions.	Select quality plaster or hardwood panelled walls and ceilings or equiv. Cut up interior with good quality partitions.
CLOSETS	Nil	Minimum	1 average quality closet per room.	Numerous closets of good quality.
DOORS	Low quality slab doors.	Av. quality slab doors or equiv.	Good quality wood doors.	Good quality wood doors and walk out glass doors.
WINDOWS	Normal basement type	Adequate window lighting.	Window lighting similar to that of first floor.	Double glazed window lighting similar to that of first floor.
ELECTRICAL	Minimum number of electrical outlets and low quality fixtures.	Average number of electrical outlets with average quality fixtures.	Adequate electrical outlets with good quality fixtures.	Many electrical outlets with good quality fixtures.
PLUMBING	Nil	Nil	2 pc washroom with average quality interior finish.	2 pc washroom with shower stall, some ceramic tile finish
KITCHENS	Nil	Nil	Nil	Nil

MENT ADDITIVES

BASEMENT APARTMENTS

3	4	5	6
Vinyl asbestos tile on concrete or equiv.	Good quality vinyl asbestos tile on concrete or equiv.	Parquet flooring on concrete or equiv.	Built up hardwood floor on concrete with vapour barrier and sub flooring.
Wallboard or equiv. on walls and ceiling. Minimum number of low cost partitions.	Drywall or plaster walls; with good quality acoustic tile ceiling or equiv. Average number of average quality partitions.	Good quality plaster walls and ceiling or equiv. Cut up interior with good quality partitions.	Select quality plaster walls and ceilings or equiv. Cut up interior with good quality partitions.
Minimum	Adequate number but small.	Average number of average size.	Numerous closets of good quality and size.
Low quality slab doors.	Average quality slab doors or equiv.	Good quality wood doors.	Good quality wood doors and double walk out glass doors.
Normal basement type.	Adequate window lighting.	Window lighting similar to that of normal first floor.	Double glazed windows; similar lighting to that of normal first floor.
Minimum number of electrical outlets and low quality fixtures.	Average number of electrical outlets with average quality fixtures.	Adequate electrical outlets with good quality fixtures.	Many electrical outlets with good quality fixtures.
Low cost 3 pc bathroom with low cost kitchen sink.	Average quality 4 pc bathroom with average quality kitchen sink.	Good quality 4 pc bathroom with vanity and good quality kitchen sink.	Good quality 4 pc bathroom with vanity and good quality kitchen sink.
Minimum quality kitchen cabinets with hardwood counter top or equiv.	Average quality kitchen cabinets with arborite counter top or equiv.	Good quality kitchen cabinets with arborite counter top and splash.	Good quality kitchen cabinets with arborite counter top and splash.

RESIDENTIAL BASEMENT ADDITIVES

FINISHED BASEMENTS

AREA CLASS \	200	250	300	350	400	500	600	700	800	900	1100	1300	1600
3	2.25	2.15	2.10	2.05	2.00	1.90	1.75	1.70	1.65	1.65	1.60	1.60	1.55
4	4.20	4.05	3.85	3.75	3.65	3.40	3.25	3.10	3.00	2.95	2.85	2.85	2.80
5	6.85	6.55	6.30	6.10	5.90	5.55	5.30	5.05	4.90	4.85	4.75	4.70	4.60
6	9.55	9.15	8.80	8.50	8.20	7.65	7.30	7.00	6.80	6.70	6.55	6.50	6.45



BASEMENT APARTMENTS

AREA CLASS \	200	250	300	350	400	500	600	700	800	900	1100	1300	1600
3	6.10	5.85	5.60	5.45	5.30	4.90	4.70	4.50	4.35	4.30	4.20	4.15	4.10
4	8.00	7.65	7.40	7.15	6.90	6.45	6.15	5.40	5.75	5.60	5.50	5.45	5.40
5	9.90	9.50	9.15	8.85	8.55	8.00	7.60	7.30	7.10	6.95	6.85	6.80	6.70
6	11.75	11.30	10.90	10.55	10.20	9.55	9.10	8.70	8.40	8.30	8.15	8.10	7.95

Height Adjustment - 2% for each foot of wall height variation.

NOTE: The above cost factors do not include costs of heating, air conditioning or sprinklers. These cost factors should be treated as additives to the basic basement cost factor. (Section 2, Page 10)

RESIDENTIAL BASEMENT ADDITIVES

RECREATION AND FAMILY ROOMS:

Fair Quality:

- | | |
|----------------|--|
| Floor Finish | - Linoleum or Asphalt Tile on Concrete |
| Wall Finish | - Wallboard or Gyproc |
| Ceiling Finish | - Wallboard or Gyproc |
| Trim | - Utility Grade Softwood |
| Door | - Low Quality |
| Wiring | - Minimum Number of Outlets |

COST per Square Foot of Floor Area \$ 1.50 to \$ 2.50

Average Quality:

- | | |
|----------------|---|
| Floor Finish | - Vinyl Asbestos Tile or Equivalent |
| Wall Finish | - Various Hardboard and Plywood Veneers |
| Ceiling Finish | - Average Quality Acoustic Tile |
| Trim | - Average Quality |
| Door | - Average Quality |
| Wiring | - Average Number of Outlets |

COST per Square Foot of Floor Area \$ 2.50 to \$ 4.00

Good Quality:

- | | |
|----------------|---|
| Floor Finish | - Built-up Wood Floor Structure and Hardwood Flooring or Equivalent |
| Wall Finish | - Various Hardwood Veneers or Equivalent |
| Ceiling Finish | - Good Quality Acoustic Tile |
| Trim | - Good Quality Hardwood Trim |
| Door | - Good Quality |
| Wiring | - Above Average Number of Outlets |

COST per Square Foot of Floor Area \$ 4.50 to \$ 6.00

NOTE: The cost factor arrived at should be treated as an additive to the basic basement cost factor (Section 2, Page 10). The range in cost factors allows for any variance in quality of finish as well as deviations from the basic average area.

RESIDENTIAL PORCHES

CON. UNCOVERED PORCH (C.U.P.)	Cost Per Sq/ft	ROOF STRUCTURES	Cost Per Sq/ft	CON. COVERED PORCH (C.C.P.) Cost per Sq/ft
Con. Terrace 4"-8"	\$1.20	Uncieled lean-to roof	\$1.20	\$2.40
"	"	"	"	"
"	"	Ceiled lean-to roof	1.80	3.00
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	Uncieled gable/hip roof	2.20	3.40
"	"	"	"	"
"	"	Ceiled gable/hip roof	2.80	4.00
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	Flat " Roof	3.30	4.50
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

Note: Porches with con. terraces 1'-3" high add \$1.00 to cost factors listed above.

Porches with wood floor structure add \$0.40 to cost factors listed above.

C.C.P. = Sum of C.U.P. and Roof Structure Cost Factors.

C.E.P. = Sum of C.U.P., Roof Structure and Wall enclosure Cost Factors.

AND CARPORTS

WALL ENCLOSURE	Cost Per Sq/ft	CON. ENCLOSED PORCH (C.E.P.) Cost per Sq/ft
Single Wall Enclosure	\$ 1.80	\$ 4.20
Low Wall Enclosure	1.30	3.70
Single Wall Enclosure	1.80	4.80
Frame siding or equiv. with lined int.	2.50	5.50
" plaster int.	3.40	6.40
Brick Veneer with lined int.	4.00	7.00
" plaster int.	4.75	7.75
Low wall enclosure	1.30	4.30
Single wall enclosure	1.80	5.20
Low wall enclosure	1.30	4.70
Single wall enclosure	1.80	5.80
Frame siding or equiv with lined int.	2.50	6.50
" plaster int.	3.40	7.40
Brick Veneer with lined int.	4.00	8.00
" plaster int.	4.75	8.75
Low wall enclosure	1.30	5.30
Single Wall enclosure	1.80	6.30
Frame siding or equiv with lined int.	2.50	7.00
" plaster int.	3.40	7.90
Brick Veneer with lined int.	4.00	8.50
" plaster int.	4.75	9.25
Low wall enclosure	1.30	5.80

Note: Recessed Porches

The area of Recessed Porches is included with the main building when determining Shape Classification. To estimate the cost of such porches, apply a percentage of the first floor basic Cost Factor. Cost an Open Recessed Porch under the same roof as main building with the same type and quality foundation by applying 75%. Cost an Enclosed Recessed Porch under the same roof as main building with the same type and quality foundation by applying 100%.

HEATING AND COOLING

ALL DWELLING UNITS (EXCLUDING MULTI-STOREY APARTMENTS)

Areas in sq/ft	ONE STOREY STRUCTURE			TWO STOREY STRUCTURE	
	Up to 1000	1000-1500	1500 & Over	Up to 1500	1500 & Over
Gravity hot air	\$0.50	\$0.45	\$0.40	\$0.45	\$0.40
Forced hot air	0.70	0.65	0.60	0.60	0.55
Hot water	1.05	0.95	0.85	0.95	0.85

*NOTE: The above cost factors should be applied over the total living area of the structure. (Unfinished basements are not considered living area).

Electric Heating

Areas in sq/ft	ONE STOREY STRUCTURE			TWO STOREY STRUCTURE	
	Up to 1000	1000-1500	1500 & Over	Up to 1500	1500 & Over
Cable type	\$0.55	\$0.50	\$0.45		
Wall insert, panel or baseboard type.	0.60	0.55	0.50	\$0.55	\$0.50

*NOTE: The cost factors for electrical heating systems should be applied over the total living area of the structure plus 50% of the unfinished basement area.

Floor or Wall Furnace

50,000 B.T.U. includes Controls	\$180.00
70,000 B.T.U. includes Controls	225.00

Multiple Residence:

* Heating cost factors for multiple residential using a central plant or electrical heating, should be selected from the medium-rise apartment building cost factors.

CENTRAL AIR CONDITIONING

Areas in sq/ft	ONE STOREY STRUCTURE			TWO STOREY STRUCTURE	
	Up to 1000	1000-1500	1500 & Over	Up to 1500	1500 & Over
	\$0.85	\$0.80	\$0.75	\$0.80	\$0.75

*NOTE: The cost factors for air conditioning include the costs of the A.C. unit and its installation cost but do not include ductwork.
Add .20¢ P.S.F. for Air Cond. systems with independent Ductwork.

FIREPLACES - RESIDENTIAL

TYPE		One Storey Building	Two Storey Building
A	Simplest Type	\$ 300 to \$ 375	\$ 400 to \$ 450
B	Minimum standard type	400 to 450	475 to 525
C	Average attractive	475 to 525	575 to 650
D	Average type with special hearth . . .	550 to 625	600 to 675
E	Ornate type	800 to 1,300	925 and UP
For <u>TWO fireboxes</u> to same chimney, <u>ADD</u>		\$ 75 and UP	\$ 100 and UP
For <u>ADDITIONAL fireplace</u> to mutual chimney, <u>ADD</u> $\frac{1}{2}$ rate as shown.			

TYPE SPECIFICATIONS:

- A 5' Base, common brick or equivalent, 26" - 30" opening, wood or common brick mantle. Variables are circulating features and quality of Materials.
- B 6' Base, common brick or equivalent, 30" - 34" opening, face brick or mitred wood mantle, flush hearth. Variables are circulating features, mantle design and size of opening.
- C 6' Base, face brick or equivalent, 32" - 36" opening, good quality mantle, smooth brick or glazed tile hearth. Variables are circulating features, size of opening, design and quality of materials.
- D 7' Base, raised hearth, 36" - 40" opening, cut stone, marble or equivalent face, stone or hardwood mantle. Variables are architectural design, quality of materials and workmanship.
- E 8' Base, raised hearth, 40" and larger opening, flagstone, marble or equivalent face, comparable mantle quality. Variables are architectural design, quality of materials and workmanship.

NOTE: Normally, heatilators do not increase the cost of fireplaces.

SPECIFICATIONS FOR RESIDENTIAL CLASS "D" GARAGES

- D - 1 Wooden mudsill; earth floor; single wall sheathing construction; minimum roof framing; low quality roll roofing; low quality swing door; no wiring.
- D - 2 Wooden mudsill or piers; gravel floor; single wall sheathing construction; light roof framing; roll roofing; swing door; no wiring.
- D - 3 Masonry or concrete piers; crushed stone floor; wall framing 2" x 4" studs 32" o.c.; low quality siding; light roof framing; roll roofing; swing door; no wiring.
- D - 4 Light masonry or concrete grade wall foundation; asphalt floor; wall framing 2" x 4" studs 24" o.c.; low quality siding; light roof framing; low quality composition shingles; good quality swing door; minimum wiring.
- D - 5 Light masonry or concrete grade wall foundation; concrete floor; wall framing of 2" x 4" studs 24" o.c.; wood siding or stucco; rafters 2" x 4", 24" o.c.; average quality composition shingles; low quality overhead door; one window; minimum wiring.
- D - 6 Standard masonry or concrete foundation; concrete floor; wall framing of 2" x 4" studs 16" o.c.; good quality siding or stucco over insul sheathing; rafters 2" x 4", 24" o.c.; good quality composition shingles; overhead door; pedestrian door; one or two windows; average wiring.
- D - 7 Standard masonry or reinforced concrete foundation; reinforced concrete floor; wall framing of 2" x 4" studs 16" o.c.; good quality siding or stucco over insul sheathing; rafters 2" x 4", 16" o.c.; with select composition or wood shingles; good quality overhead door; pedestrian door; two windows; good wiring.
- D - 8 Architecturally designed; standard masonry or reinforced concrete foundation; reinforced concrete floor; wall framing of 2" x 4" or 2" x 6" studs 16" o.c.; select quality siding or stucco over insul sheathing; rafters 2" x 6", 16" o.c.; with select composition or wood shingles; good quality overhead door; pedestrian door; two vented windows; heavy duty wiring.
- D - 9 Architecturally designed; heavy standard masonry or reinforced concrete foundation; reinforced concrete floor; wall framing of 2" x 6" studs 16" o.c.; select quality siding or stucco over insul sheathing; rafters 2" x 6", 12" o.c.; select quality shakes or slate roofing; select quality overhead door; one or two pedestrian doors; two or more vented windows; interior plaster finish; built-in storage cabinets; heavy duty wiring.
- D - 10 Architecturally designed; heavy standard masonry or reinforced concrete foundation; reinforced concrete floor; wall framing of 2" x 6" studs 16" o.c.; select quality veneers; fully insulated; rafters 2" x 6" or 2" x 4", overhead door; two or more pedestrian doors; several vented windows; good quality painted plaster finish; built-in storage cabinets; heavy duty wiring.

Note:- STANDARD FOUNDATION IS BELOW FROST LINE.

RESIDENTIAL GARAGES

BUILDING COST FACTORS

CONSTRUCTION CLASS D

CLASS AREA \ CLASS	1	2	3	4	5	6	7	8	9	10
200	2.57	2.75	2.96	3.32	3.60	4.19	5.11	6.36	8.00	9.83
220	2.51	2.68	2.85	3.16	3.43	4.00	4.91	6.13	7.72	9.53
240	2.47	2.62	2.77	3.05	3.31	3.85	4.75	5.95	7.49	9.29
260	2.44	2.59	2.72	2.97	3.22	3.74	4.63	5.81	7.31	9.10
280	2.43	2.56	2.68	2.93	3.16	3.66	4.54	5.69	7.16	8.94
300	2.42	2.55	2.66	2.89	3.11	3.57	4.45	5.58	7.04	8.81
320	2.41	2.53	2.65	2.86	3.07	3.51	4.38	5.48	6.94	8.69
340	2.39	2.52	2.63	2.85	3.05	3.46	4.32	5.40	6.84	8.58
360	2.38	2.51	2.62	2.84	3.04	3.44	4.27	5.33	6.76	8.48
380	2.37	2.50	2.61	2.83	3.03	3.42	4.24	5.27	6.68	8.40
400	2.37	2.48	2.60	2.81	3.01	3.41	4.21	5.22	6.62	8.33
420	2.35	2.48	2.58	2.80	3.00	3.40	4.20	5.18	6.58	8.27
440	2.35	2.47	2.58	2.79	2.99	3.38	4.19	5.16	6.54	8.22
460	2.34	2.47	2.57	2.79	2.98	3.37	4.18	5.15	6.52	8.18
480	2.34	2.46	2.57	2.78	2.98	3.36	4.16	5.14	6.50	8.16
500	2.33	2.46	2.56	2.78	2.96	3.36	4.15	5.12	6.49	8.15

GARAGE COST MODIFICATIONS

When garages differ from the specifications, it may be necessary to either add or deduct for the following:

Cost per Sq. Ft. of Floor Area

Unpainted Plaster or Drywall	\$ 0.60 to \$ 0.80
Rough Plaster	0.30 to 0.40
Concrete Flooring	0.45 to 0.50
Asphalt Flooring	0.30 to 0.35

SPECIFICATIONS FOR RESIDENTIAL CLASS "C" GARAGES

- C - 3 Light masonry or concrete grade wall foundation; gravel floors; 8" concrete block or clay tile walls; light roof framing; roll roofing; swing door; no wiring.
- C - 4 Light masonry or concrete grade wall foundation; asphalt floor; 8" concrete block or clay tile walls; light roof framing; low quality composition shingles; good quality swing door; minimum wiring.
- C - 5 Standard masonry or concrete foundation; concrete floor; 8" masonry wall with common brick veneer; rafters 2" x 4", 24" o.c.; average quality composition shingles; low quality overhead door; one window; minimum wiring.
- C - 6 Standard masonry or concrete foundation; concrete floor; 8" masonry wall with face brick veneer; rafters 2" x 4", 24" o.c.; good quality composition shingles; overhead door; pedestrian door; one or two windows; average wiring.
- C - 7 Standard masonry or reinforced concrete foundation; reinforced concrete floor; 8" masonry wall with select face brick veneer; rafters 2" x 4", 16" o.c.; select composition or wood shingles; good quality overhead door; pedestrian door; two windows; good wiring.
- C - 8 Architecturally designed; standard masonry or reinforced concrete foundation; 8" masonry wall with select face brick veneer or equivalent; rafters 2" x 6", 16" o.c.; select composition or wood shingles; good quality overhead door; pedestrian door; two vented windows; heavy duty wiring.
- C - 9 Architecturally designed; heavy standard masonry or reinforced concrete foundation; reinforced concrete floor; 10" to 12" masonry wall with select quality face brick veneer or equivalent; rafters 2" x 6", 12" o.c.; select quality shakes or slate roofing; select quality overhead door; one or two pedestrian doors; two or more vented windows; good quality interior plaster finish; built in storage cabinets; heavy duty wiring.
- C - 10 Architecturally designed; heavy standard masonry or reinforced concrete foundation; reinforced concrete floor; 12" masonry wall with select face brick veneer or equivalent; rafters 2" x 6", 12" o.c.; select quality shake or tile roofing; cupola; select quality overhead door; two or more pedestrians doors; vented windows; good quality painted plaster finish; built in storage cabinets; heavy duty wiring.

Note: STANDARD FOUNDATION IS BELOW FROST LINE.

RESIDENTIAL GARAGES

BUILDING COST FACTORS

CONSTRUCTION CLASS C

CLASS AREA \	3	4	5	6	7	8	9	10
200	2.79	3.23	4.07	5.41	6.51	7.87	9.38	10.69
220	2.68	3.10	3.93	5.24	6.32	7.68	9.16	10.46
240	2.57	2.98	3.80	5.09	6.14	7.49	8.95	10.24
260	2.48	2.88	3.69	4.95	5.98	7.31	8.75	10.03
280	2.40	2.78	3.58	4.82	5.83	7.15	8.56	9.83
300	2.33	2.70	3.49	4.70	5.69	7.00	8.39	9.64
320	2.27	2.63	3.40	4.60	5.56	6.86	8.23	9.47
340	2.21	2.57	3.33	4.50	5.44	6.73	8.07	9.30
360	2.19	2.53	3.28	4.42	5.34	6.61	7.93	9.15
380	2.16	2.49	3.23	4.35	5.24	6.51	7.80	9.01
400	2.15	2.47	3.19	4.29	5.16	6.41	7.69	8.88
420	2.14	2.46	3.17	4.25	5.09	6.33	7.58	8.76
440	2.13	2.45	3.16	4.21	5.03	6.26	7.49	8.66
460	2.12	2.43	3.15	4.19	4.98	6.20	7.41	8.56
480	2.11	2.42	3.14	4.18	4.95	6.15	7.34	8.48
500	2.10	2.41	3.13	4.17	4.93	6.12	7.28	8.41

GARAGE COST MODIFICATIONS

When garages differ from the specifications, it may be necessary to either add or deduct for the following:

Cost per Sq. Ft. of Floor Area

Unpainted Plaster or Drywall . . .	\$ 0.60 to \$ 0.80
Rough Plaster	0.30 to 0.40
Concrete Flooring	0.45 to 0.50
Asphalt Flooring	0.30 to 0.35

MULTIPLE RESIDENTIAL GARAGES

BUILDING COST FACTORS

CONSTRUCTION CLASS D

CLASS AREA \	3	4	5	6	7	8	9	10
800	1.90	2.15	2.50	3.00	3.60	4.30	5.20	6.25
1600	1.85	2.10	2.45	2.95	3.55	4.25	5.15	6.15
3200	1.75	2.00	2.35	2.85	3.45	4.15	5.05	6.00
4800	1.65	1.90	2.25	2.75	3.35	4.05	4.95	5.85
6400	1.60	1.85	2.20	2.70	3.30	4.00	4.85	5.70
9600	1.55	1.80	2.15	2.60	3.20	3.90	4.70	5.50
12800	1.50	1.75	2.10	2.55	3.15	3.85	4.60	5.40



CONSTRUCTION CLASS C

CLASS AREA \	3	4	5	6	7	8	9	10
800	3.00	3.25	3.60	4.15	4.80	5.60	6.50	7.55
1600	2.95	3.20	3.55	4.10	4.70	5.50	6.40	7.45
3200	2.85	3.10	3.45	4.00	4.55	5.35	6.20	7.25
4800	2.75	3.00	3.35	3.90	4.40	5.20	6.05	7.05
6400	2.70	2.95	3.30	3.80	4.25	5.05	5.90	6.85
9600	2.65	2.85	3.20	3.65	4.10	4.80	5.65	6.55
12800	2.60	2.80	3.15	3.55	4.00	4.60	5.40	6.30

SWIMMING POOL COST FACTORSPRIVATE POOLS

Costs are based on complete installations including excavation under normal conditions.

REINF. CONCRETE POOLS area range: 800 to 450 sq. ft.
 Rect. shape, re. con.; painted or equiv.; 2'
 walk surrounding pool; 6" tile trim; under-
 water lights; filter; steps; diving board and
 stand; automatic skimmer, valves and fittings;
 12" coping and backwash; ladder; avg. depth
 range 3' to 8'.

AVERAGE COST PER SQ. FT. OF WATER AREA	\$8.50 - \$11.40
--	------------------

ALL METAL-VINYL LINED-IN-GROUND POOLS . . . area range: 800 to 512 sq. ft.
 All shapes, steel or al.-vy1.-lined; filter,
 diving board & stand, wall skimmer, inlet &
 outlet fittings; ladder; coping; avg. depth,
 3' to 7'.

AVERAGE COST PER SQ. FT. OF WATER AREA	\$5.85 - \$8.00
--	-----------------

FIBERGLASS IN-GROUND POOLS area range: 800 to 450 sq. ft.
 All shapes, fiberglass shell; filter, auto-
 matic skimmer, fittings; coping; avg. depth
 range 2'6" to 6'6".

AVERAGE COST PER SQ. FT. OF WATER AREA	\$8.50 - \$11.50
--	------------------

HOMEMADE POOLS

Cost by applying In-Place Costs (Section 5)

PUBLIC POOLS

(as installed at resorts, hotels, Schools etc. for Public Use)

AVERAGE COST PER SQ. FT. OF WATER AREA	\$12.50 - \$15.00
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ADDITIVES OR DELETIONS

Heater - Depending on Size & Quality	\$700 - \$1000
Irregular Shape Pools	\$400 - \$ 500
Filter	\$500 - \$ 800
Ladder	\$100 - \$ 150
Underwater Light	\$300 - \$ 425
Tile Trim	\$200 - \$ 240
Walkway around Pool	\$150 - \$ 200
Dry Well	\$175 - \$ 240
Coping	\$120 - \$ 175
Painting or Equiv. Finish	\$200 - \$ 260

Note: Add for tile facing of interior wall surfaces.

PASSENGER ELEVATORS

To compute the costs of passenger elevators, the base cost per shaft is determined by the capacity, the speed and the type of door operation. To arrive at a total cost, the suggested cost per stop, multiplied by the number of stops, must be added to the basic cost.

SELECTIVE-COLLECTIVE PASSENGER ELEVATORS (A.C. RHEOSTATIC CONTROL)

<u>Speed</u> (ft/min)	<u>Capacity</u> (lbs.)	<u>Power-Operated Doors</u>		<u>Cost per Stop</u>
		<u>Car and Shaft</u>	<u>Shaft Only</u>	
100	1,500	\$11,750	\$11,250	P L \$1,340
100	2,000	15,000	14,400	U S 1,460
(VARIABLE VOLTAGE GEARED)				
150	2,000	\$18,000	\$17,300	\$1,500
200	2,000	24,500	23,700	P 1,540
200	3,000	29,000	28,000	L 1,600
300	2,500	33,000	32,000	U 1,650
300	4,000	38,000	37,000	S 1,740
400	4,000	40,500	39,500	1,800

FULLY AUTOMATIC HIGH SPEED PASSENGER ELEVATORS (VARIABLE VOLTAGE GEARLESS)

<u>Quality</u>	<u>Speed</u> (ft/min)	<u>Capacity</u>			<u>Cost per Stop</u>
		<u>2000 lbs</u>	<u>2500 lbs</u>	<u>3500 lbs</u>	
Average	500	\$44,000	\$46,000	\$49,000	P \$1,850
Good	500	51,000	52,000	54,000	L 2,000
Good	600-700	69,000	71,000	75,000	U S 2,300

The good and average ratings refer to the quality of the cab and doors. Elevators operating at more than 700 FPM should be individually analyzed and priced. Small low speed residential and office elevators with two to four stops and single automatic controls cost \$8,500 to \$12,000 depending on quality. The cost of hydraulic elevators up to 5 floors is 15% less than that of comparable electric elevators. For more than 5 floors the cost of hydraulic elevators is more than that of comparable electric ones.

FREIGHT ELEVATORS

To compute the cost of freight elevators, the base cost per shaft is determined by the capacity and speed of the unit. In addition to the cost per stops, other variables set out below must be considered in arriving at the total cost.

ELECTRIC FREIGHT ELEVATORS
(VARIABLE VOLTAGE GEARED)

Speed	Capacity				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$17,900	\$19,050	\$22,400	\$26,900	\$31,500
Add per stop	1,680	1,730	1,850	1,960	2,010

Costs include single automatic control system and levelling.
Add \$1200. per shaft for selective-collective operation.

ELECTRIC FREIGHT ELEVATORS
(A.C. RHEOSTATIC CONTROL - SINGLE AUTOMATIC)

Speed	Capacity				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$10,300	\$11,800	\$15,700	\$18,300	\$20,600
Add per stop	1,500	1,550	1,625	1,725	1,800
100 FPM	9,000	10,300	13,900	15,800	17,500
Add per stop	1,400	1,450	1,500	1,575	1,625
50 FPM	8,050	9,000	12,000	13,700	15,300
Add per stop	1,350	1,400	1,450	1,500	1,550

Add for: Selective - collective operation - \$1300
Automatic levelling - 1800

For rear doors, add \$1400 for the first opening and \$900 for each additional opening. For power operation of doors, add \$2700 each for the first front and rear door, and \$600 for each additional front or rear door.

HYDRAULIC ELEVATORS

The base cost per shaft is 80% of the cost of A.C. rheostatic elevators of comparable speed and capacity. All costs per stop and variations of controls are 100% of the cost of comparable A.C. rheostatic elevator.

SIDEWALK ELEVATORS

Including sidewalk doors - \$8,000 - \$11,000 each

RESIDENTIAL PLUMBING

FIXTURE COSTS

ITEM	INSTALLED COST	
	STANDARD	SPECIAL
Kitchen Sink	\$ 125	\$ 150
Basin (Lavatory)	125	150
Toilet (Water Closet)	165	190
Bathtub	240	265
Stall Shower	150	200
Laundry Tubs	85	110
2 pc. Bathtub and Basin	365	415
2 pc. Bathtub and Toilet	405	455
2 pc. Basin and Toilet	260	310
3 pc. Bathtub, Basin and Toilet	430	470
3 pc. Toilet, Basin and Shower Stall	340	390
4 pc. Bathtub, Shower Head, Toilet and Basin	450	500
Flush-O-Matic Toilet, including Septic Tank, etc.	240	290
Pail-A-Day Toilet	150	200
Bidget	280	295
 <u>ADDITIONAL UNITS: *</u>		
Kitchen Sink or Basin	100	125
Toilet	140	165
2 pc. Toilet and Basin	215	265
3 pc. Toilet, Basin and Shower Stall	265	315
Shower Head over Tub	30	45

* RATES to be utilized when additional fixtures are added to a basic installed plumbing unit.
For Coloured Fixtures add \$8 Per Fixture.

GARDEN SHEDS

The following are cost factors for light wood framed structures, pre-engineered utility buildings, and light concrete block utility buildings. Foundations of wood mud sills or concrete block. Piers are included

WOOD AND CONCRETE BLOCK SHEDS

Area	50	100	150	300	500	700	800	1000
Base Rate	\$3.15	3.00	2.85	2.55	2.35	2.15	2.05	1.85

Basic Height 8'

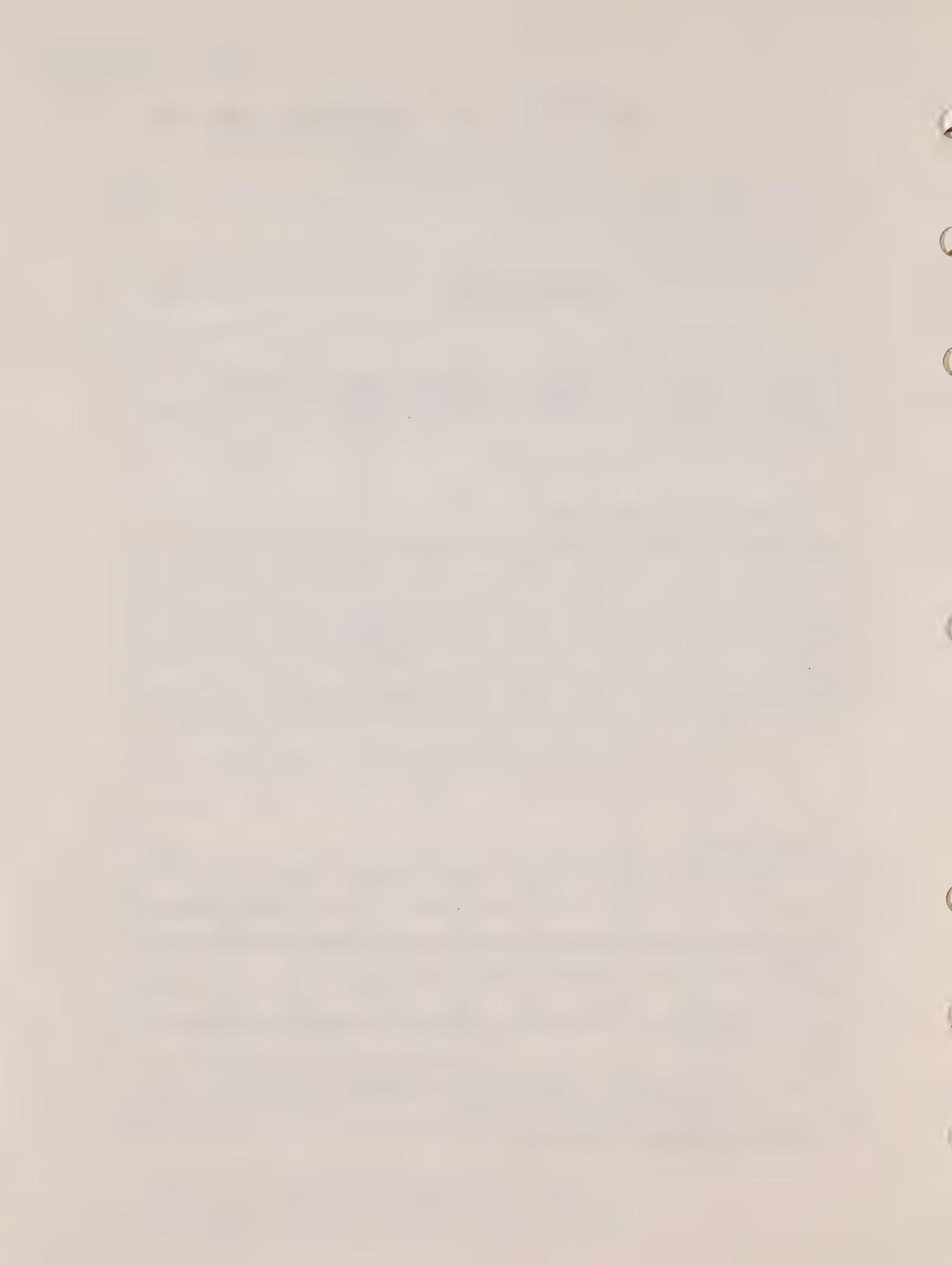
METAL SHEDS

Area	30	50	70	100	120	150	170	200
Base Rate	2.75	2.70	2.70	2.50	2.45	2.40	2.35	2.30

Basic Height 6'

NOTE: For Foundation Below Frost Line Add. 40¢ - 20¢ P.S.F.
For Electrical Add 20¢ P.S.F.

HEIGHT ADJUSTMENT: 3% Per Foot



SECTION 3R PAGE 19
Base Year 1969

PATIOS

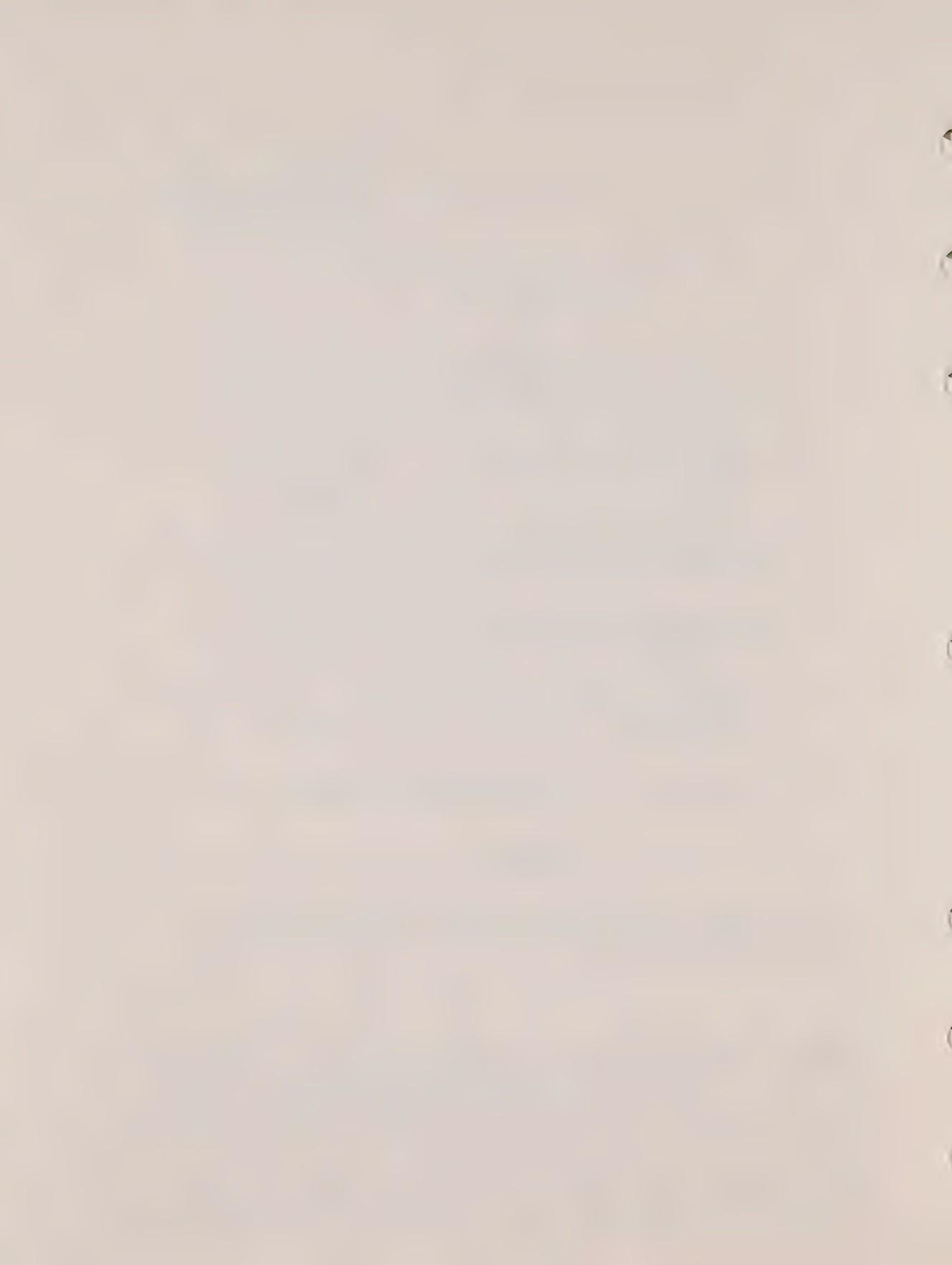
(1)	Plain Precast Conc. Slabs on Sand Fill	Cost Per S. F.	\$0.75
(2)	Coloured Precast Conc. Slabs on Sand Fill		\$0.95
(3)	1" Flagstone Random Breaks on Sand Fill		\$2.45
(4)	2" Flagstone Random Breaks on Sand Fill		\$3.10

NOTE: Add 20¢ Per S. F. for Flagstone Set in Concrete.

SAUNAS

Typical Cedar Lined Enclosure or Cabinet Including heating based on Cubic Content.

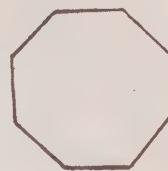
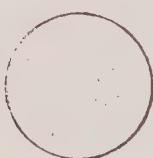
Cubic Content	up to 300	301 to 500	501 to 700	701 to 900	901 to 1100	1101 and over
Cubic Foot Cost Factor	\$3.00	\$2.90	\$2.80	\$2.70	\$2.60	\$2.60



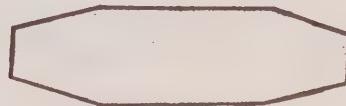
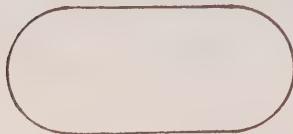
ABOVE GROUND SWIMMING POOLS
GENERAL COMMENTS

Above ground pools have been classified into 3 groups.

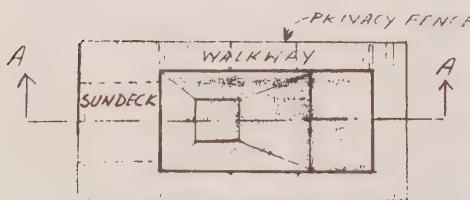
- 1) Round and octagonal pools without sundecks, walkways and privacy fences.



- 2) Oval and near oval pools without sundecks, walkways and privacy fences.



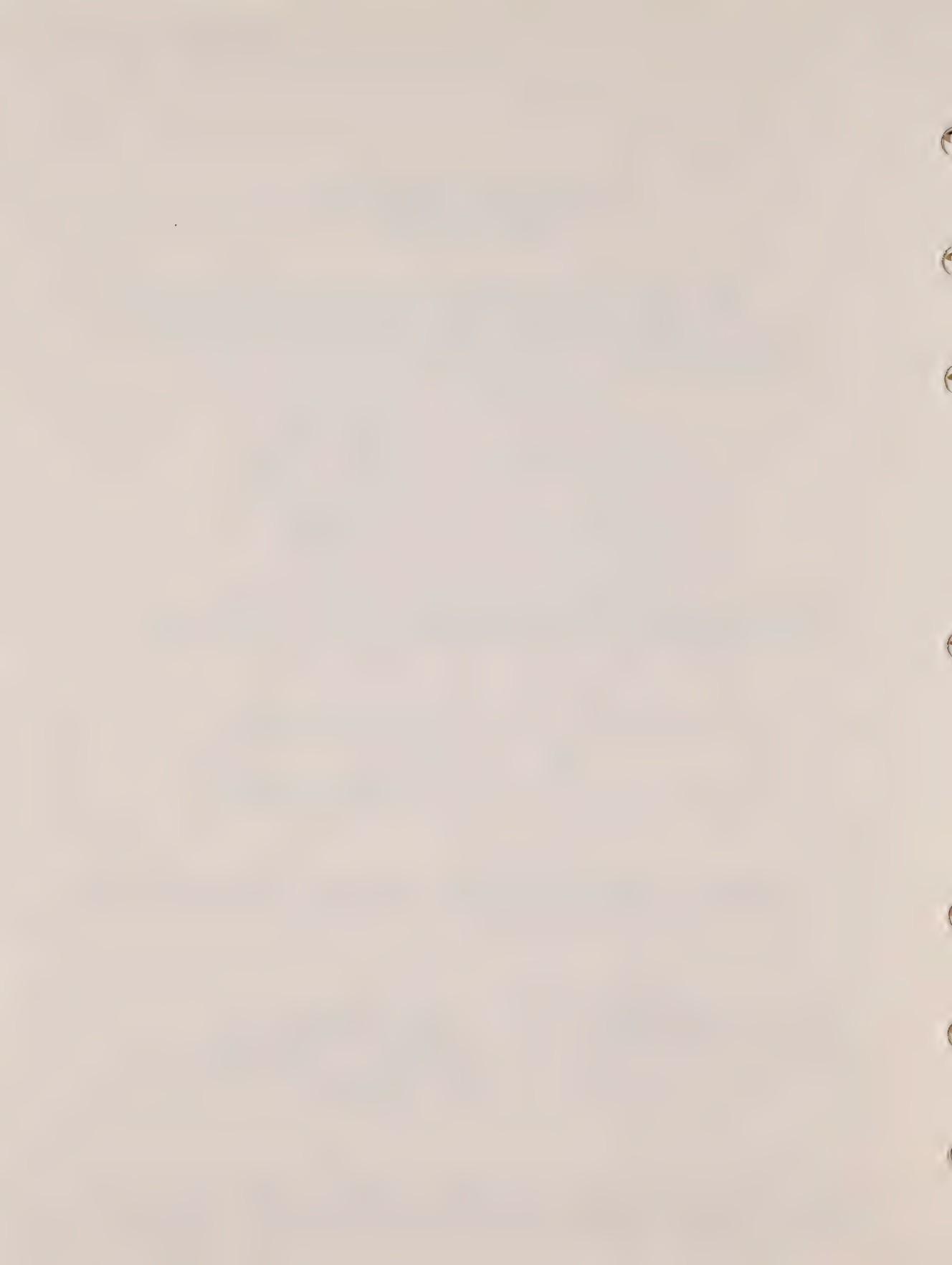
- 3) Rectangular pools with sundecks, walkways, privacy fences and either flat or hopper floors.



PLAN

SECTION AA

The cost factors for round, octagonal, oval and near oval pools include installation under normal conditions. The costs are for average construction. Pools that are above average in



quality and durability should be assessed for an additional sum as shown in the additives. Above average quality features include heavy gauge walls finished with natural flagstone or similar material, silver anodized top rails or all aluminum construction. In all cases sundecks, walkways, privacy fences and hopper floors should be treated as additives.

The cost factors for rectangular pools include the cost of installation under normal conditions and also include the cost of sundecks, walkways and privacy fences. If any of these features are missing, then their cost should be deducted using the figures shown under deletions below the table for rectangular pools. The privacy fence refers to the fencing of fibreglass or similar material erected around the perimeter of the elevated walkway. It is not the chain link or wooden fence erected to comply with safety or other regulations. The basic cost is for pools with a constant depth between 3' to 5'. For pools with a hopper or deep end, an extra sum as shown in the additives should be added.

For other additives such as heating, underwater lighting etc, the cost factors as for in ground pools Section 3, Page 15 Residential Section should be used. Rates in the tables are based on net water area.

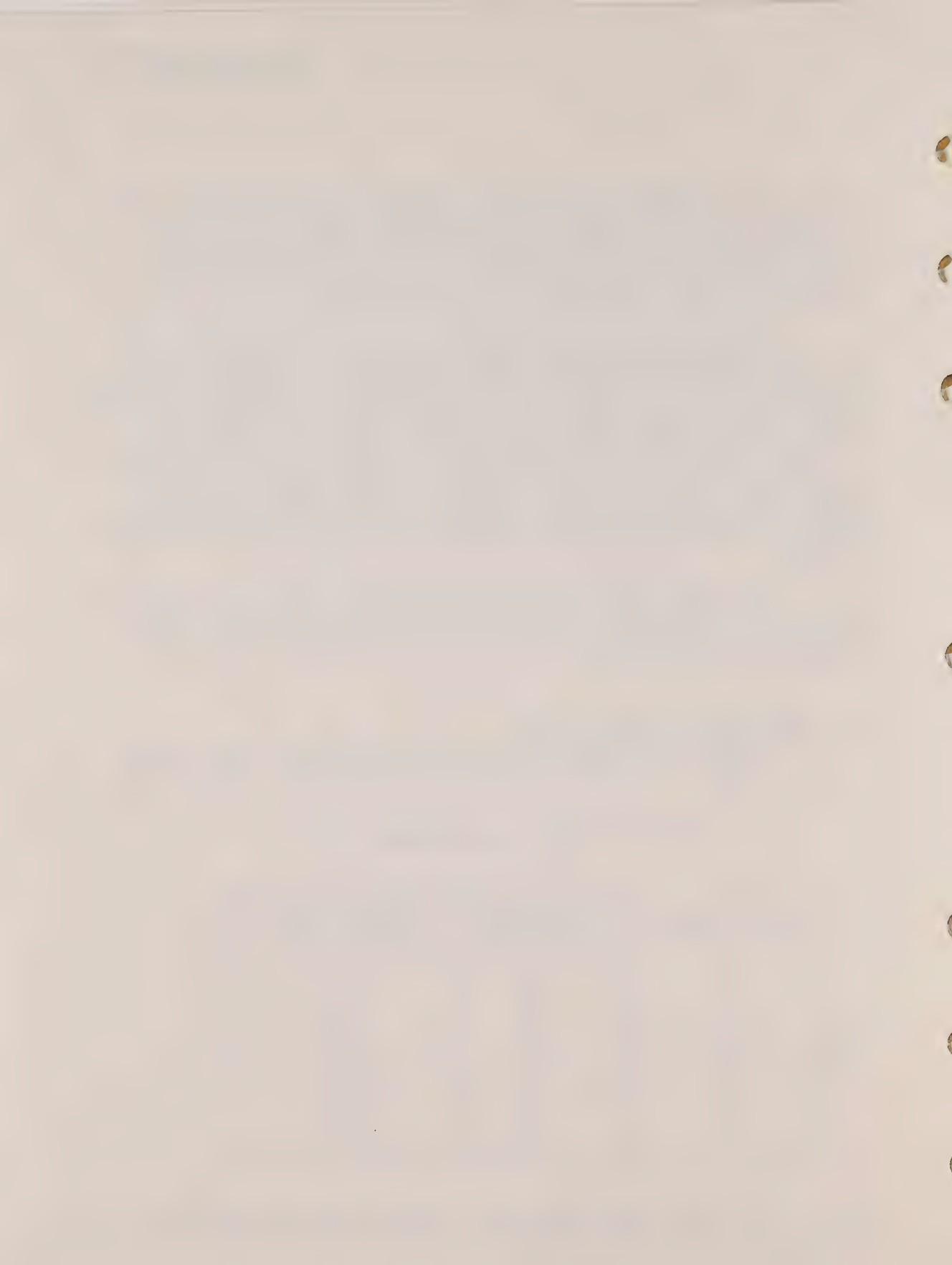
1. ROUND AND OCTAGONAL POOLS

Steel, aluminum or other durable material, vinyl lined, filter, skimmer, valves and fittings, ladder, from 3' to 5' deep.

TABLE FOR ROUND AND OCTAGONAL POOLS

Pool Diameter	Water Area In Sq. Ft.	Cost Per Sq. Ft. Of Water Area
15'	177	\$3.90
18'	254	\$3.50
20'	314	\$3.15
24'	452	\$2.40
27'	573	\$2.05
30'	707	\$1.80

For other round sizes and octagonal pools compute the area and interpolate for rates.



ADDITIVES

For pools above average quality and durability.....\$200 to \$400.
For sundecks.....\$1.00 per sq. ft. of deck.
For walkways 2' to 4' wide.....\$100 to \$200.
For privacy fencing.....\$100 to \$200.
For hopper bottoms (6' to 7' deep ends) ..\$150 to \$200.

Example 1

An octagonal pool with sides of 10'0", above average construction, hopper bottom, without sundeck, walkway or privacy fence-

Basic Rate 478 x 2.30 =.....	\$1,099
Add for above average quality...	300
Add for hopper bottom.....	<u>175</u>
RCN	\$1,574

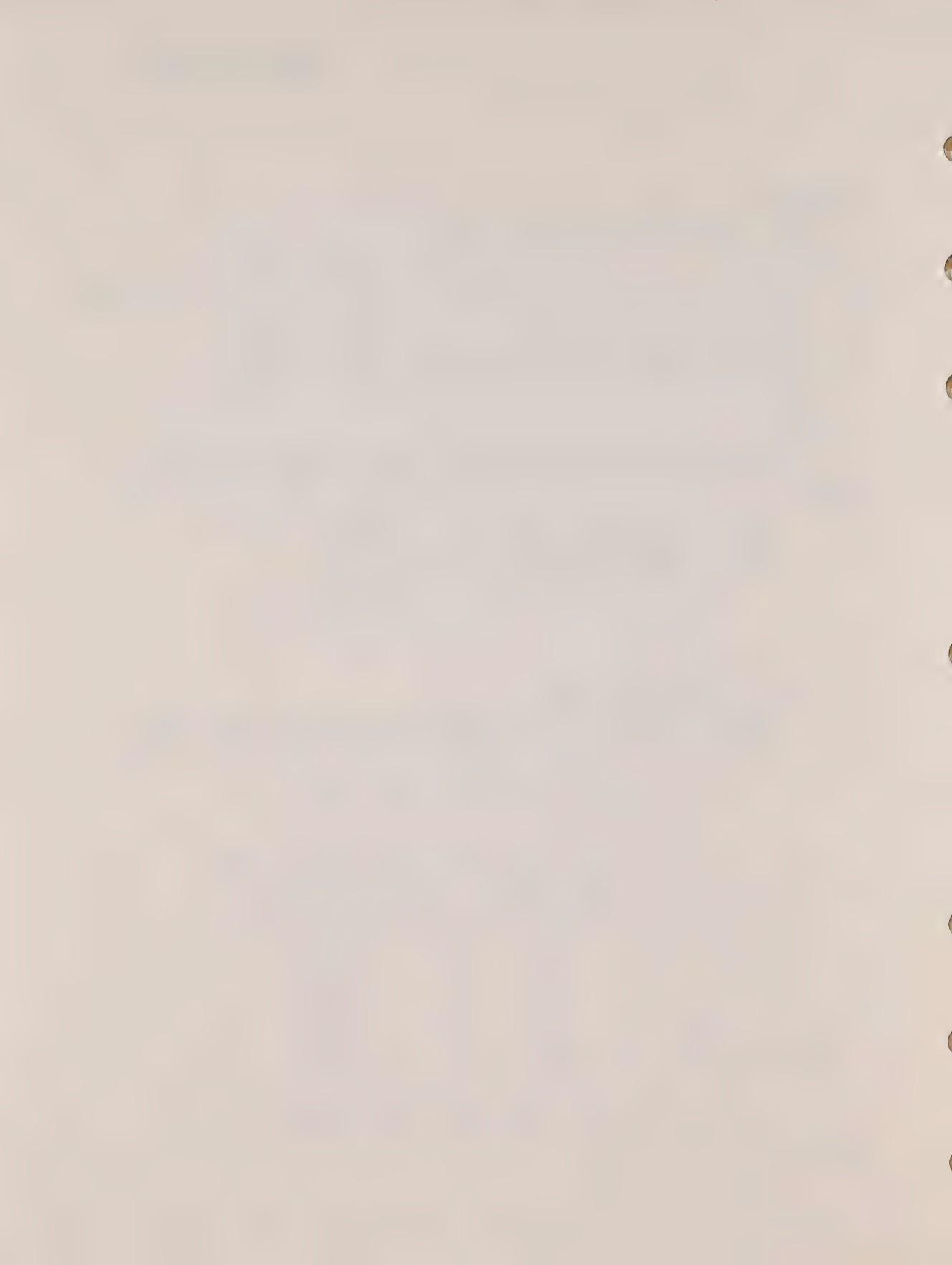
2. OVAL AND NEAR OVAL POOLS

Steel, aluminum or other durable material vinyl lined, filter, skimmer, valves and fittings, ladder; from 3' to 5' deep.

TABLE FOR OVAL AND NEAR OVAL POOLS

Pool Size	Water Area In Sq. Ft.	Cost Per Sq. Ft. Of Water Area
12' x 24'	257	\$3.85
15' x 24'	312	\$3.55
15' x 30'	402	\$3.05
18' x 30'	470	\$2.80
18' x 35'	560	\$2.50

For other oval and near oval sizes compute area and interpolate for rates.



ADDITIVES

For pools above average quality and durability.....\$220 to \$450.
For sundecks.....\$1.00 per sq. ft. of deck.
For walkways 2' to 4' wide.....\$100 to \$200.
For privacy fencing.....\$100 to \$200.
For hopper bottoms (6' to 7' deep ends) ..\$150 to \$200.

Example 2

An oval pool average quality, 18' x 33' with 15' x 10' sundeck, 2'6" walkway, and privacy fence all around.

Basic Rate 524 x \$2.60 =.....	\$1,362
Sundeck 15 x 10 x \$1.00 =.....	150
Walkway.....;.....	175
Privacy Fencing.....	<u>175</u>
RCN	\$1,862

3. RECTANGULAR POOLS

Steel, aluminum or wood with 6' to 12' sundeck at one end, 2' to 4' walkway and privacy fence all round, plain or printed vinyl liner, filter, skimmer, valves and fittings, ladder, depths between 3' to 5'.

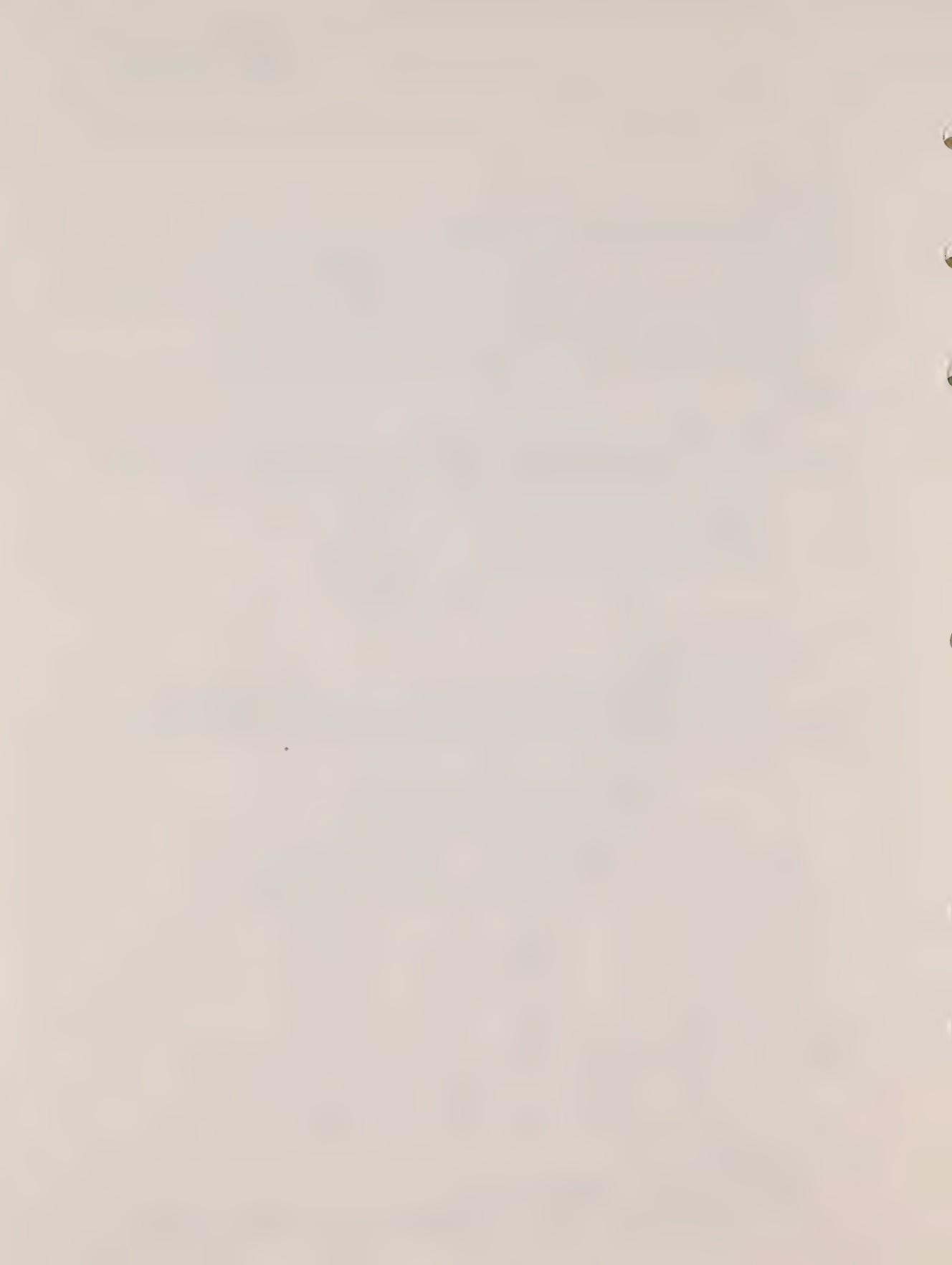
TABLE FOR RECTANGULAR POOLS
(Constant depth 3' to 5')

Pool Size	Water Area In Sq. Ft.	Cost Per Sq. Ft. Of Water Area
12' x 20'	240	\$8.60
12' x 24'	288	\$7.80
16' x 24'	384	\$6.65
16' x 32'	512	\$5.60
20' x 40'	800	\$4.30

For other sizes compute area and interpolate.

ADDITIVES

For pools with hopper bottoms
(i.e. deep ends) 6' to 7' and above\$300 to \$600



DELETIONS

For sundecks \$1.00 per sq.ft. of deck.
For walkways 2' to 4' wide \$200 to \$400.
For privacy fencing \$150 to \$300.

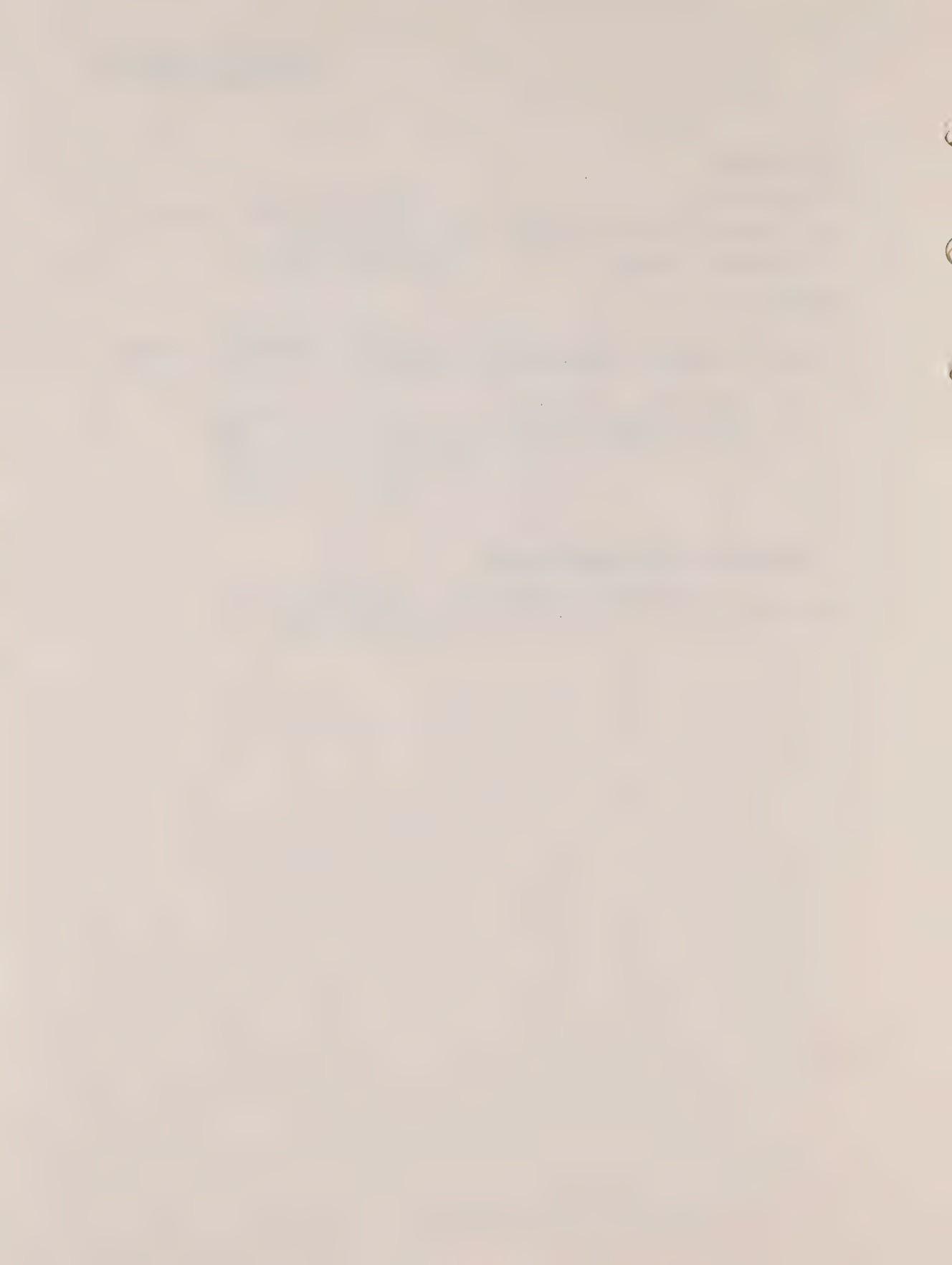
Example 3

A 14' x 30' pool with 8' sundeck, 2' walkway, privacy fence all round, hopper bottom, heated.

Basic Rate 420 x 6.35	.....	\$2,667
Add for hopper bottom	.....	400
Add for heater	.....	<u>800</u>
	RCN	\$3,867

DEPRECIATION AND OBSOLESCENCE

For all above ground pools, reduce the R.C.N. by 50%, to allow for depreciation and obsolescence.



GENERAL APARTMENT BUILDING COMMENTS

Specifications follow for two basic types of apartment building structures, load-bearing and reinforced concrete. Normally those structures which are load-bearing do not exceed 7 storeys in height whereas those constructed of reinforced concrete range from 5 storeys and up. The structures which are described in this Section are in excess of 4 storeys in height with elevator service a requirement.

The primary factors to be considered by the assessor in determining the quality classification of medium or high-rise apartment buildings are those amenities which would likely be considered by a tenant; such as: the overall plan, the size and layout of the suites, the number of suites, the ratio of living area (rentable space) to non-living area (corridors, service areas and foyer) and the services offered.

The market cost factors contained in the following tables are not predicated on average construction costs but are the result of analysing market transactions through the Metropolitan Toronto area and developing rate schedules from this analysis. The market cost factors include allowance for balconies, canopies, elevators, and all those components described in the specifications.

The specifications and market cost factors included in this section are based upon market data from a base year of 1969.

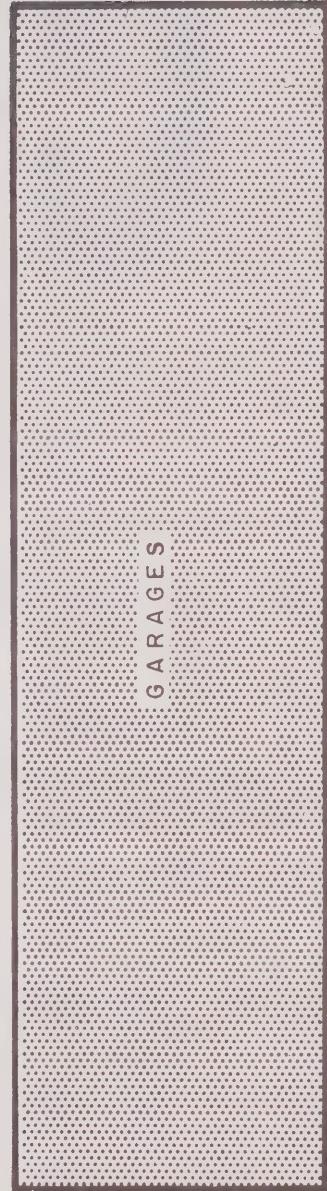
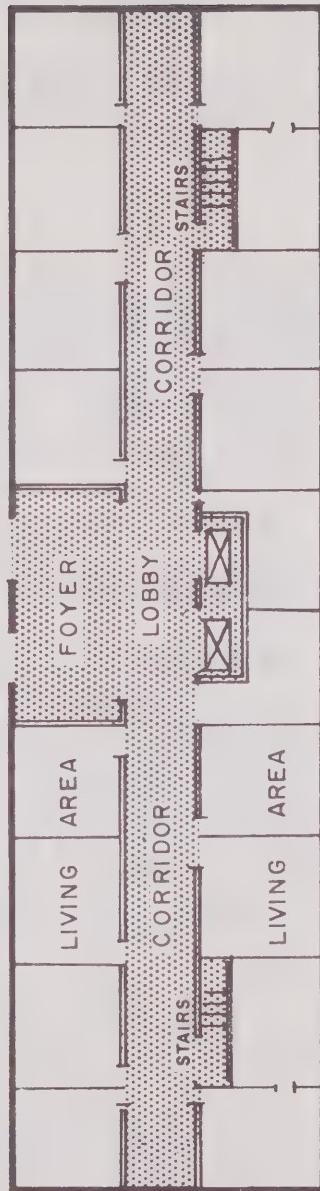
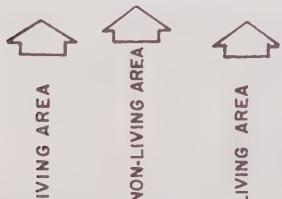
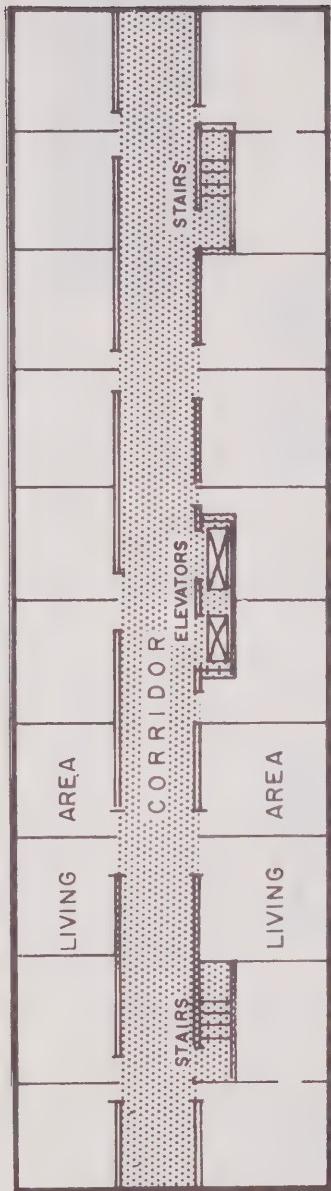
Market Cost Factors for such additives as basements, parking garages, heating and saunas are included in this section and should only be used in conjunction with apartment building valuations.

METHOD OF DETERMINING R.C.N. OF APT. BLDGS.

- (a) Inspect building to determine quality classification.
- (b) Determine total square foot area (including all storeys) of building, using outside measurements. (Excluding balconies.)
- (c) Determine total square foot area (including all storeys) of rentable living area, using outside measurements as shown in Floor Plan Page 3. (Excluding balconies.)
- (d) Determine total square foot area of non-living area - i.e. corridors, service areas, foyers, stairwells, elevator shafts, etc. - by deducting (c) from (b).
- (e) Determine total square foot area of basement used as service area and storage area.
- (f) Determine total square foot area of underground parking garage, including ramp area.
- (g) Multiply gross area (b) by the appropriate rate.
- (h) Multiply the total basement service area (e) by the appropriate rate.
- (i) Multiply the total area of underground parking by the flat rate given.
- (j) For detached surface or "punched-in" garages, apply rates as shown in Section 3 Page 14, for appropriate class and area.
- (k) Treat heating, air-conditioning, sprinklers, swimming pools and saunas as additives using appropriate rates.

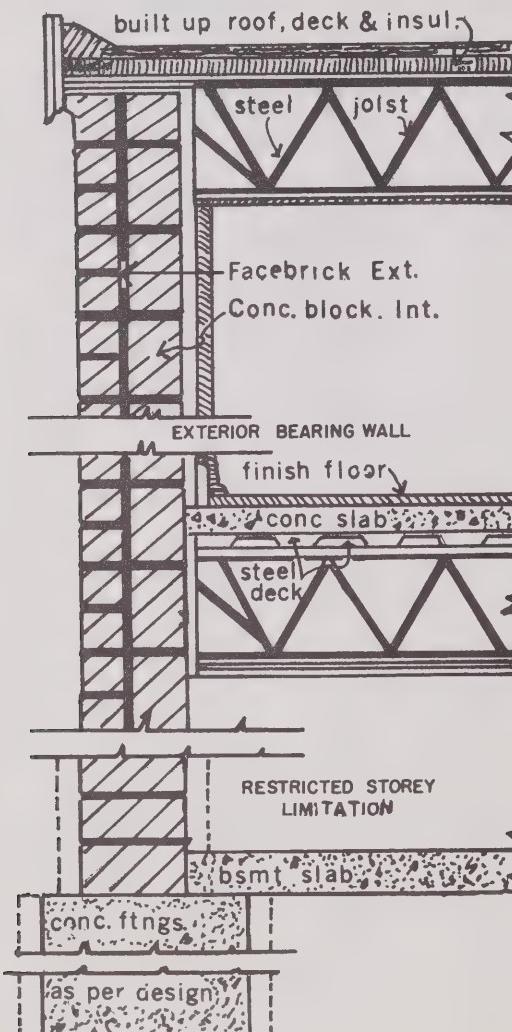
Class B
&
Class C

MULTI-FAMILY HIGH-RISE APARTMENTS



C

MULTI-FAMILY (MEDIUM-RISE) APARTMENTS

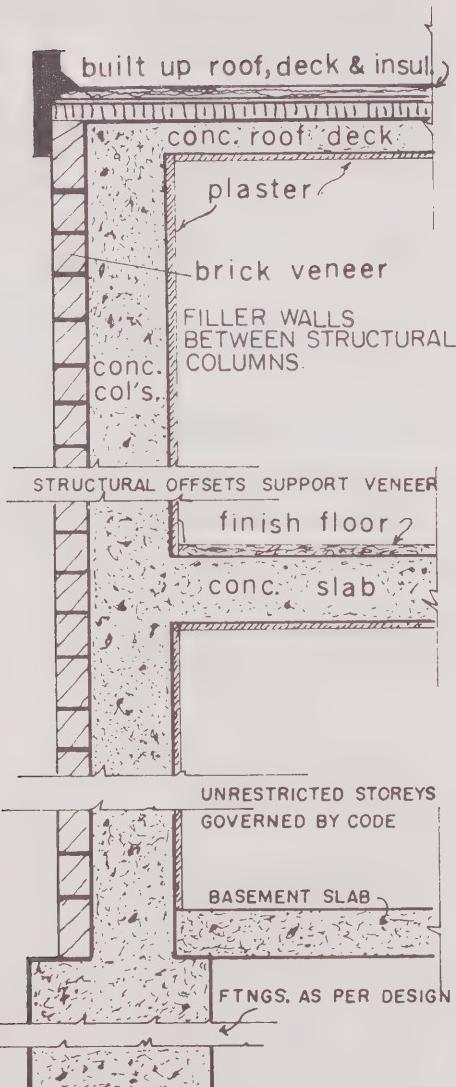


CONSTRUCTION DETAILS

"C" CLASS Structural Framing usually has Masonry load bearing walls with open web steel joists, metal pan and concrete floors.

B

MULTI-FAMILY (HIGH-RISE) APARTMENTS



CONSTRUCTION DETAILS

"B" CLASS Structural Framing usually has reinforced concrete column and slab or shear wall construction.

SPECIFICATIONS FOR MULTI-FAMILY

CLASS COMPONENTS	5	6
EXTERIOR CLADDING:	Face brick with conc. blk. back-up. 30 to 50% fenestration with single glazing.	Face brick with conc. blk. back-up. 40 to 60% fenestration with single glazing.
BALCONIES:	Conc. slab balconies with wrought iron railing. Aluminum storm door.	Conc. slab balconies with metal panels or equivalent. Aluminum storm door.
LOBBIES: Doors:	Steel framed entrance doors.	Alum. framed entrance doors.
Flooring:	Terrazzo flooring or equiv.	Good quality terrazzo flooring or equiv.
Walls:	Painted drywall or equiv.	Plaster wall with some paneling or equiv.
Size:	Minimum size.	Adequate lobby with waiting area.
Lighting:	Fluorescent lighting.	Recessed lighting and spotlight fixtures.
CORRIDORS: Flooring:	Coloured conc. or vinyl asb.	Terrazzo & Broadloom.
Walls:	Painted block.	Painted plaster.
Lighting:	Minimum number of surface mounted fixtures.	Adequate number of surface mounted fixtures.
SUITE FINISH:		
Flooring:	Parquet and vinyl asb.	Parquet and vinyl asb.
Walls & Ceiling:	Painted drywall.	Painted drywall.
Bathroom Finish:	Vinyl asb. flooring with painted walls & half ceramic over tub.	Ceramic flooring with painted walls and full ceramic over tub; vanity.
Bathroom Fixtures	4 - pc. standard.	4 - pc. standard.
ELEVATORS:	Low speed; min. capacity.	Low speed; adequate capacity
SERVICES AVAILABLE:	Locker rooms & laundry room on base floor.	Locker rooms, laundry room with lounge, rec. rm. on base floor.

NOTE: The above specifications relate to both "B" class and "C" class character of construction as described on Pages 4 and 5.

APARTMENT BUILDINGS

CONST. CLASS 'B & C'

7	8
Select quality face brick with concrete block back-up. 50 to 80% fenestration with double glazing.	Pre-cast conc. panels with conc. block back-up or equivalent. 50 to 90% fenestration with sealed double glazing.
Conc. slab balconies with masonry panels or equiv. Double sliding door with screen.	Conc. slab balconies with masonry panels or equiv. Double sealed sliding doors with screen, some enclosed sun rooms or two balconies per suite.
S.S. framed entrance doors or equiv. Good quality terrazzo & broadloom flooring or equiv. Panel wall, travertine, mosaic, etc. Spacious lobby and waiting area.	Bronze entrance doors or equiv. Quarry tile flooring or equiv. Marble wall, vitrolite, etc. Spacious architecturally designed lobby and waiting area.
Illuminated ceiling and spotlight fixtures.	Chandelier fixtures.
Good quality terrazzo & broadloom. Plast. with good quality wall covering. Good quality recessed & wall mounted fixtures.	Select quality terrazzo & broadloom. Plast. with select quality wall covering. Select quality recessed, wall mounted and spotlight fixtures.
Parquet & vinyl. Painted drywall. Ceramic flooring with painted walls and full ceramic over tub; good quality vanity & mirror. 4 - pc. standard + 2 pc.	Parquet, broadloom & vinyl. Painted plaster. Ceramic flooring with three ceramic walls & one mirror wall or equiv.; select quality vanity. Two 4 - pc. good quality bathrooms.
Low speed; adequate capacity.	High speed; adequate capacity.
Locker rooms, laundry room with lounge available, rec. rooms on base floor.	Laundry room with lounge on each floor & locker rooms, rec. rooms, etc. on base floor.

NOTE: The above specifications relate to both "B" class and "C" class character of construction as described on Pages 4 and 5.

APARTMENT BUILDINGS

RATES

CONST. CLASS 'B'

Class Area \ Class Area	5	6	7	8
50 M *	9.75	10.55	11.40	12.65
75 M	9.45	10.20	11.05	12.30
100 M	9.20	9.95	10.80	12.05
125 M	8.95	9.70	10.55	11.80
150 M	8.75	9.50	10.35	11.60
175 M	8.55	9.30	10.15	11.40
200 M	8.40	9.15	10.00	11.25
225 M	8.30	9.05	9.90	11.15
250 M	8.20	8.95	9.80	11.05
275 M	8.10	8.85	9.70	10.95
300 M	8.05	8.80	9.65	10.90
325 M	8.00	8.75	9.60	10.85
350 M	7.95	8.70	9.55	10.80
400 M	7.90	8.65	9.50	10.75
600 M	7.85	8.60	9.45	10.70

* M Signifies 1000 S.F.

NOTE: The market cost factors shown above include those items described in the specifications, canopies, lobby ornamentation, and intercom system.

APARTMENT BUILDINGS

RATES

CONST. CLASS 'C'

Class Area \ Class	5	6	7
30 M*	11.15	12.15	13.30
35 M	10.45	11.45	12.60
40 M	9.90	10.90	12.05
45 M	9.45	10.45	11.60
50 M	9.10	10.10	11.25
55 M	8.80	9.80	10.95
60 M	8.55	9.55	10.70
65 M	8.35	9.35	10.50
70 M	8.20	9.15	10.30
75 M	8.05	9.00	10.10
80 M	7.95	8.90	10.00
85 M	7.85	8.80	9.90
90 M	7.80	8.70	9.80
95 M	7.75	8.65	9.75
100 M	7.70	8.60	9.70
110 M	7.65	8.55	9.65
125M	7.60	8.50	9.60
150 M	7.55	8.45	9.55

* M signifies 1000 S.F.

NOTE: The market cost factors shown above include those items described in the specifications, canopies, lobby ornamentation, and intercom systems.

APARTMENT BUILDINGS

UNFINISHED BASEMENT RATES

Area	500	1,000	2,000	3,000	4,000	5,000	6,000	7,000
Rate	4.97	4.76	4.56	4.45	4.37	4.31	4.27	4.23

Area	8,000	10,000	12,000	14,000	16,000	18,000	20,000	24,000
Rate	4.19	4.14	4.09	4.05	4.02	3.99	3.96	3.92

OTHER ADDITIVES

ITEM	DESCRIPTION	RATE PER SQ. FOOT
PARKING	Underground	3.00
HEATING	Hot water up to 10 storeys	.50
	Hot water over 10 storeys	.55
	Electric throughout	.55
AIR CONDITIONING	Central air conditioning	1.00 - 1.20
	Air conditioning with individual suite control.	1.40 - 1.60
SPRINKLERS	Fire marshal standards	.35
SAUNA BATHS	Typical cedar lined baths, complete with heating and lighting.	COST PER CU. FOOT 2.50 - 3.00

BASEMENT FINISHES

(ADD TO UNFINISHED BASEMENT RATES)

ITEM	DESCRIPTION	RATE PER SQ. FOOT
PARTITIONS	Depending on density.	1.00 - 1.50
FLOORS	Vinyl asbestos tile	.40
	Terrazzo	1.10
	Painted concrete.	.25
CEILING	Suspended acoustic tile	.75



PROCEDURE FOR COSTING RESIDENTIAL SECOND STOREYS

Full Two Storey Single Residences

The second storey cost factor is determined by using 60% of a first storey cost factor, selected on the basis of the character of construction, shape and size of each second storey. The quality rating of the second storey will be established by inspection of the entire structure. The adjusted cost factor is applied to the area of the second storey based on exterior measurements.

One and One-Half Storey Residences

Such structures have limited ceiling heights to varying degrees. The pitch of the roof and the height of exterior walls determine the correct percentage to be applied. The second storey cost factor for this type of structure is selected on the basis of character of construction and the shape of the second storey. The size used in determining the rate corresponds to that area of the first floor covered by the same roof structure. The cost factor as found by applying the proper percentage (Section 5, Page 2), is charged against the finished area of the second storey. The finished area is considered to have, as a minimum, 4 feet of height. Where dormers are found, the second storey rate should be charged against the additional living area afforded by them.

Duplexes

The cost factor for a self-contained unit on the second floor is arrived at by using 75% of a first storey cost factor, selected on the basis of the character of construction, shape and size of the second storey. Included in this rate are the additional costs of kitchen cabinets, partitions, plumbing, closets and a separate entrance found in a self-contained unit.

Third Storeys

Third storey cost factors are derived by adding 2% to the previously determined second storey cost factor. The adjusted cost factor is applied to the previously specified living area.

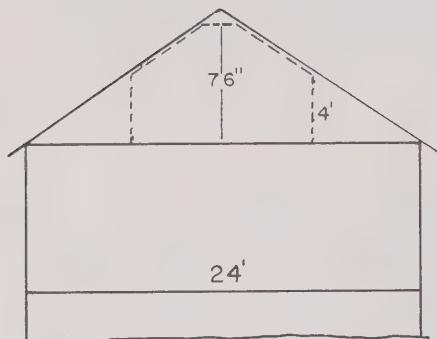
Additives

Such as heating, fireplaces, etc. should be costed in the normal manner

NOTE: Partially finished second or third storeys should be In-Place Costed (Section 7).

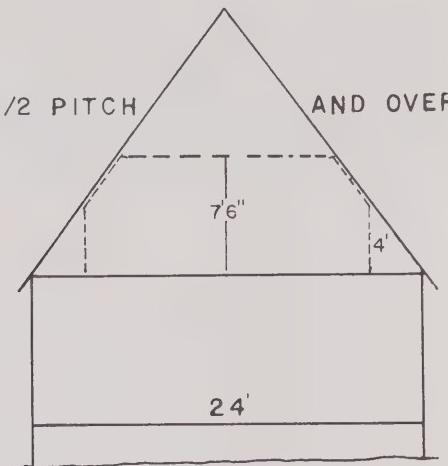
ILLUSTRATIONS OF LIMITED UPPER STOREYS

UNDER 1/2 PITCH



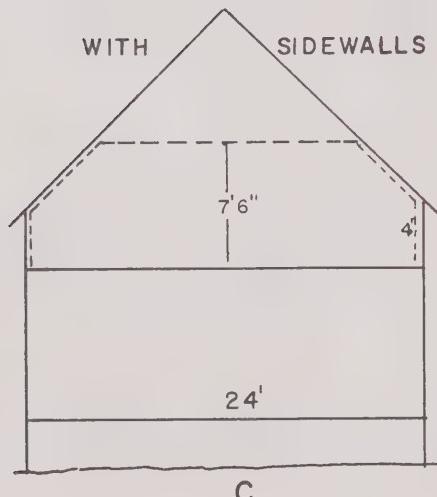
A

1/2 PITCH AND OVER



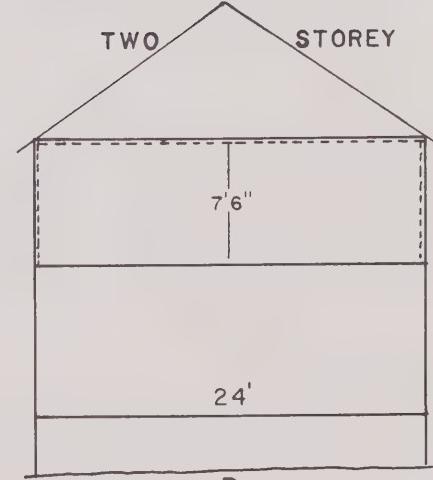
B

WITH SIDEWALLS



C

TWO STOREY



D

SECOND STOREY PERCENTAGESILLUSTRATIONPERCENTAGE

A 35 %

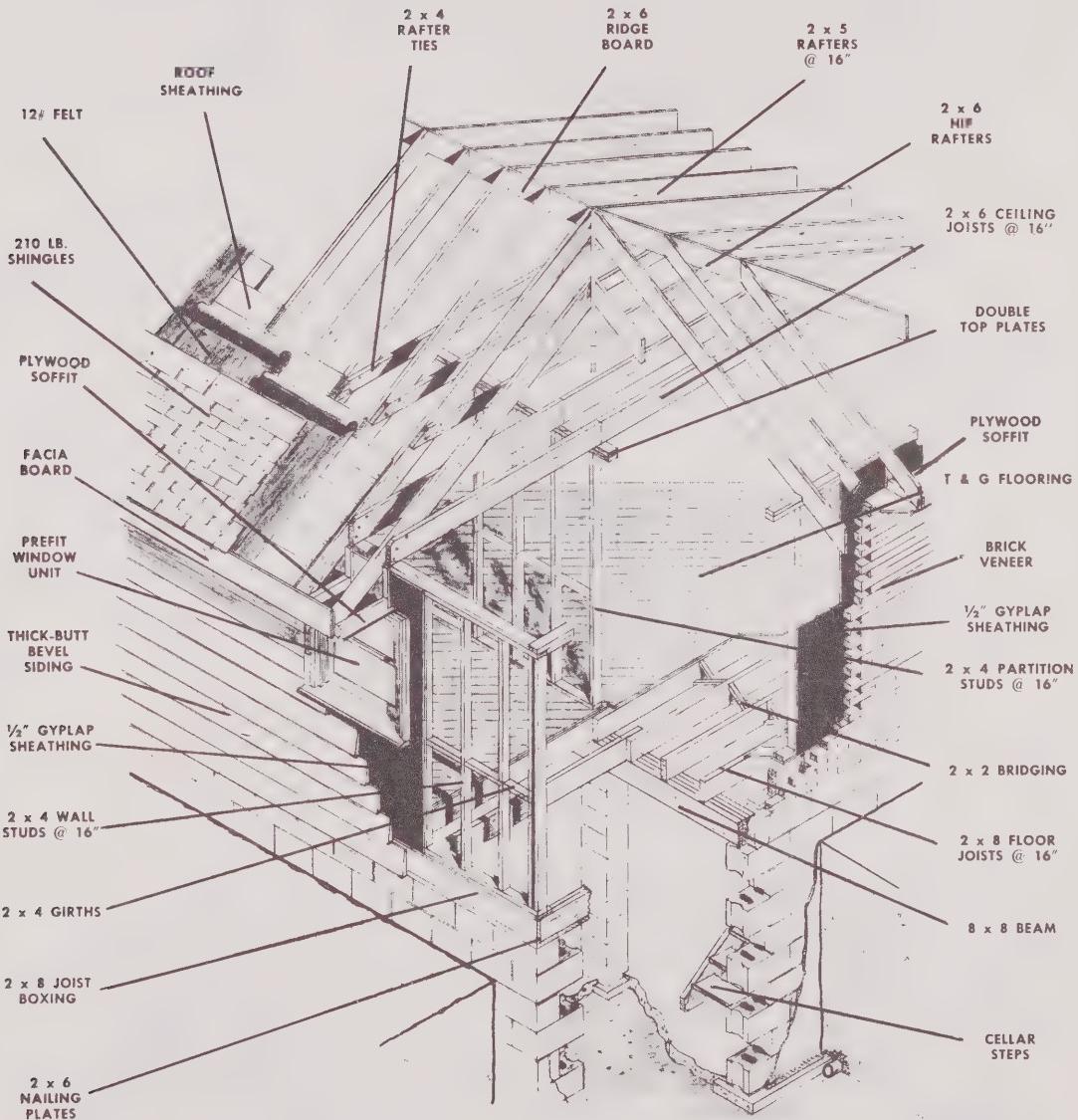
B 45 %

C 55 %

D 60 %

CONSTRUCTION DETAILS

TYPICAL HOUSE COMPONENTS



ROOF CONSTRUCTION

TABLE OF CONVERSION FACTORS FOR COMMON RAFTERS

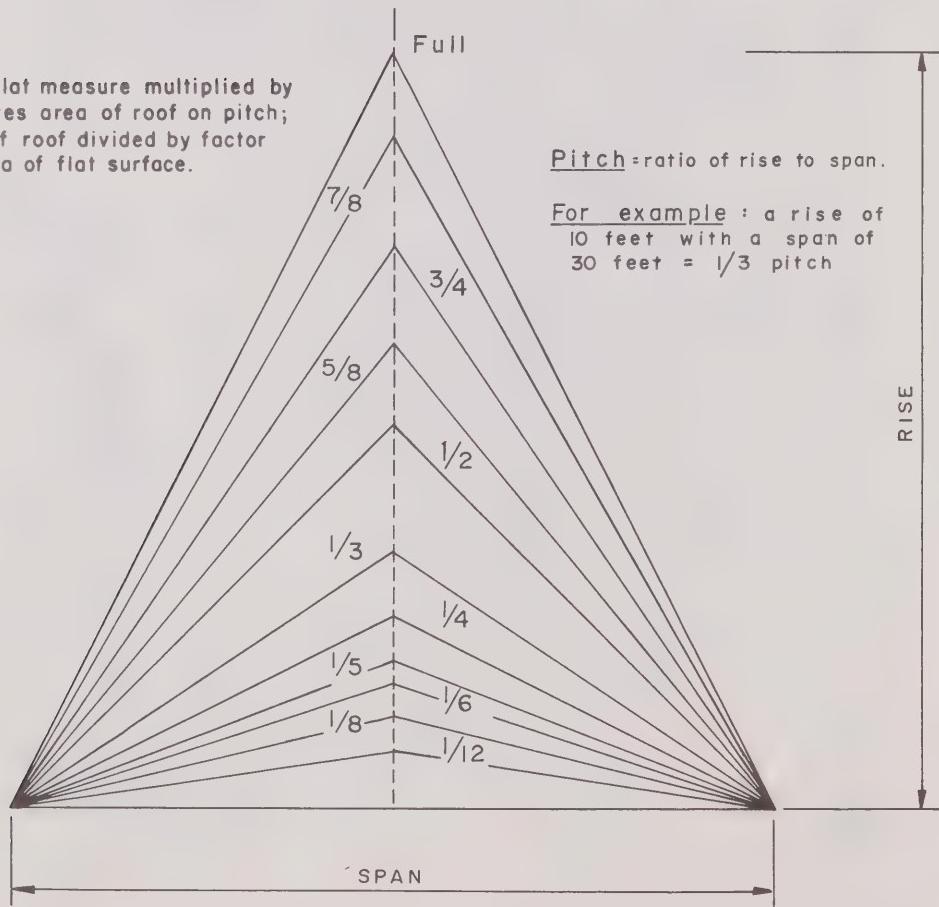
Pitch Of Roof	1/12	1/11	1/10	1/9	1/8	1/7	1/6
Factor	1.014	1.017	1.02	1.025	1.031	1.04	1.054

Pitch Of Roof	1/5	1/4	1/3	1/2	5/8	3/4	7/8	Full
Factor	1.077	1.12	1.202	1.414	1.601	1.803	2.016	2.236

*Area of flat measure multiplied by factor gives area of roof on pitch; or area of roof divided by factor gives area of flat surface.

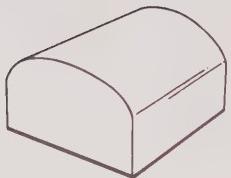
Pitch = ratio of rise to span.

For example : a rise of 10 feet with a span of 30 feet = $1/3$ pitch

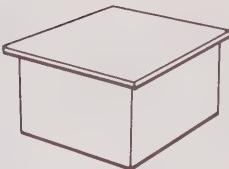


ROOFS

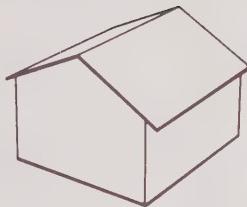
ROOF TYPES



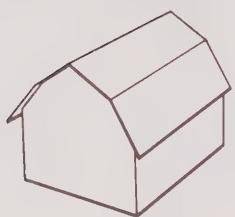
ARCHED



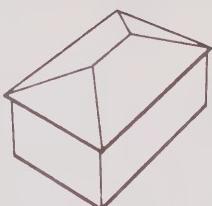
FLAT



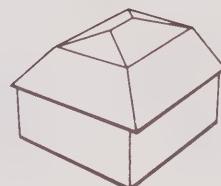
GABLE



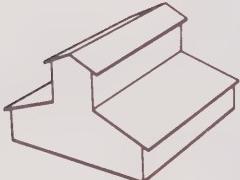
GAMBREL



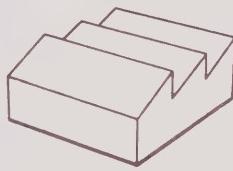
HIP



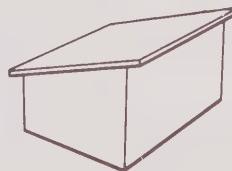
MANSARD



MONITOR

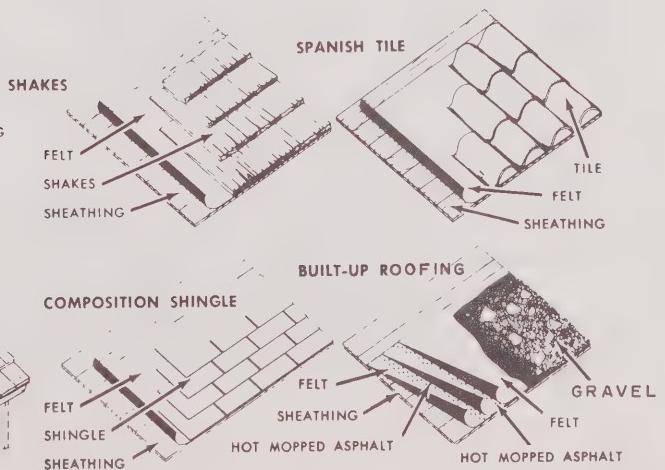
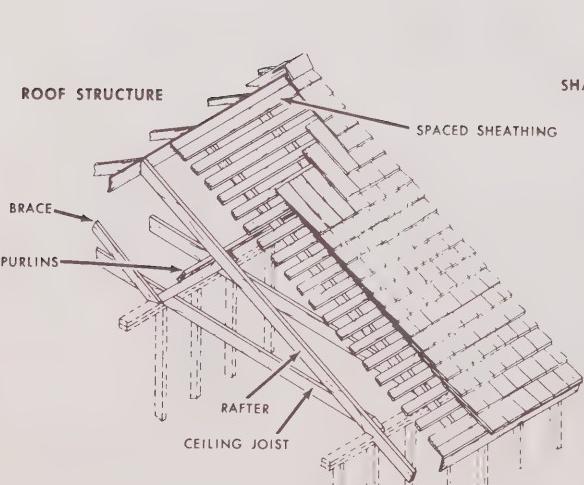


SAWTOOTH

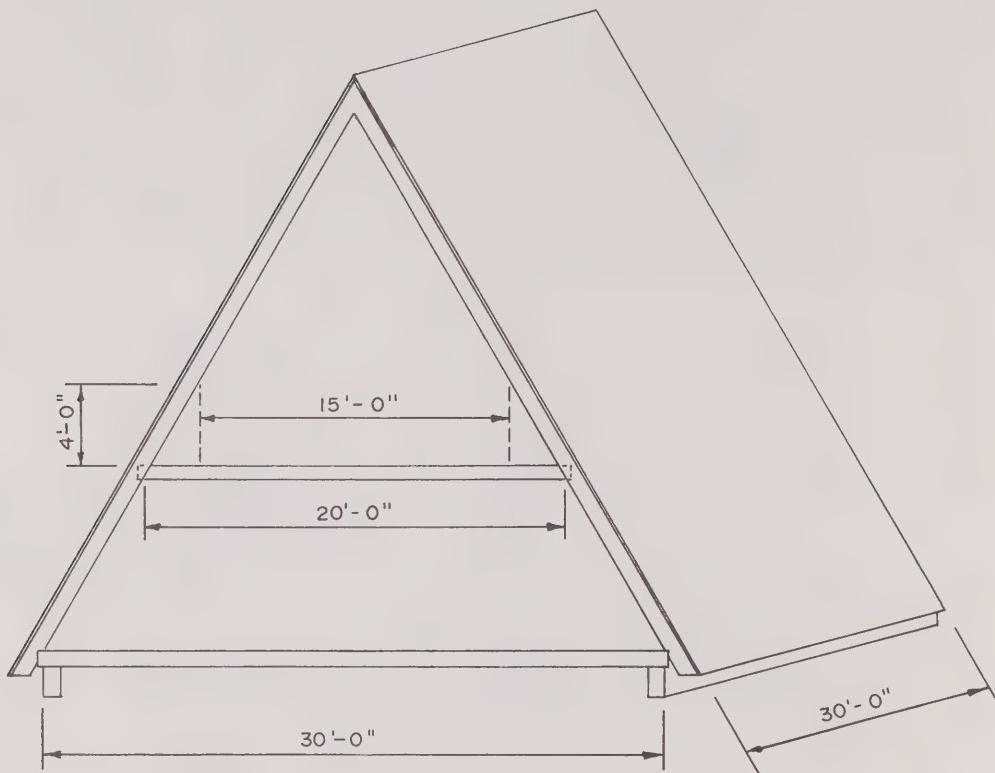


SHED

ROOF COMPONENTS



'A' FRAME STRUCTURE

COMPUTATION PROCEDURE

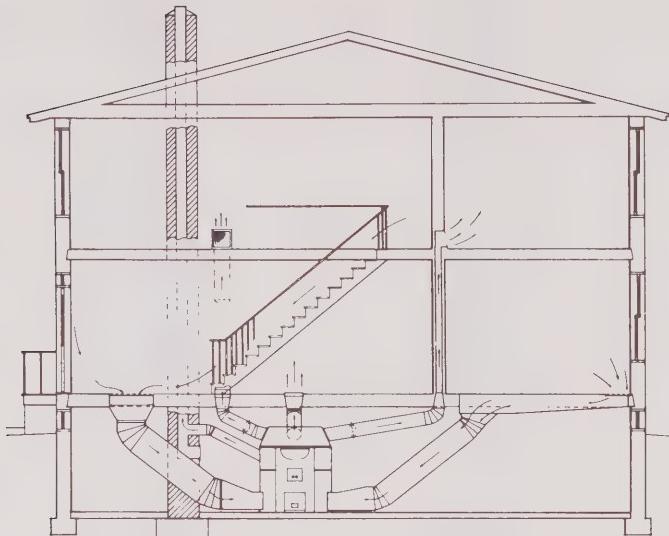
1ST STOREY CALCULATION

- (1) $30' \times 30' = 900$ sq. ft. This is the base area for determining a first floor rate, depending on quality classification.
- (2) Apply this rate to total living area of first storey in the usual manner.

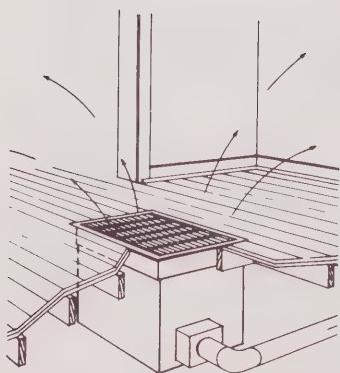
2ND STOREY CALCULATION

- (3) Determine the first floor rate for the area, $20' \times 30' = 600$ sq. ft., of a similar quality classification.
- (4) Following 6C Page 2, Illustration B, apply 45% to the rate determined in (3), to arrive at a second storey rate.
- (5) Apply this second storey rate to the finished liveable floor area of the second storey. i.e. $15' \times 30' = 450$ sq. ft.
- (6) Normal procedures for additives and basements should be followed.

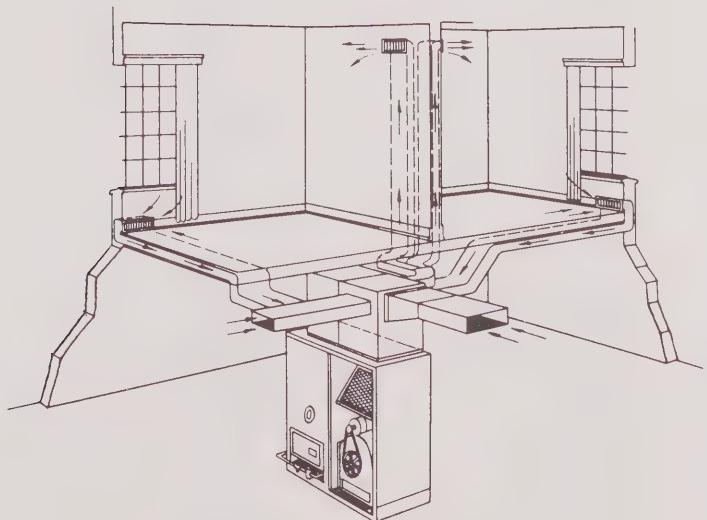
HEATING SYSTEMS



GRAVITY FURNACE



FLOOR



FORCED-AIR FURNACE, PACKAGE UNIT

ABBREVIATIONS

Acoustic	Ac.	Electric	Elec.
Addition	Addn.	Elevator	Elev.
Air Conditioning	A/C.	Escalator	Esc.
Aluminum	Alum.	Exterior	Ext.
Apartment	Apt.	Excavation	Exc.
Asbestos	Asb.		
Asphalt	Asph.		
Attached	Att.	Factory	Fact.
Average	Avg.	Finish	Fin.
		Fireplace	Fp.
Basement	Bsmt.	First Storey	1st. Sty.
Basin	B.	Flagstone	Flgst.
Bath Tub	B.T.	Floor	F1.
Beam	Bm.	Fluorescent	Fluor.
Bevel	Bev.	Fluted	Flu.
Block	Blk.	Forced Hot Air	F.H.A.
Board	Bd.	Foundation	Fdn.
Board & Batten	B.B.	Frame	Fr.
Brick	Br.		
British Thermal Unit	B.T.U.		
Building	Bldg.	Gallon	Gal.
Built-Up Roof	B.U.R.	Galvanized Iron	G.I.
		Garage	Gar.
Casement	Csmt.	Glass	Gl.
Ceiled (soffit)	Cld.	Grade	Grd.
Ceramic	Cer.	Gravel	Gr.
Cinder	Cin.	Gravity Hot Air	G.H.A.
Clay	Cl.	Gauge	Ga.
Column	Col.	Gypsum	Gyp.
Commercial	Comm.		
Composition	Comp.	Hardwood	Hwd.
Concrete	Conc.	Heating	Htg.
Conduit	Cond.	Heavy	Hvy.
Construction	Const.	Height	Ht.
Corrugated	Corr.	Horsepower	H.P.
Cubic Feet	Cu. Ft.	Hot Water	H.W.
		House	Hse.
Depreciation	Depr.		
Detached	Det.		
Diagonal	Diag.	Industrial	Ind.
Dock Leveller	Dk. Lev.	Insulated Brick	Ins. Br.
Door	Dr.	Insulation	Insul.
Double	Db1.	Interior Office	Int. Off.
Double Hung	D.H.		
Drawing	Dwg.		
Drywall	Dwl.		
Dwelling	Dwlg.	Joist	Jst.

ABBREVIATIONS

Laundry	Ldry.	Second Storey	2nd Sty.
Lavatory	Lav.	Septic Tank	Sep. Tk.
Linear Feet	Lin. Ft.	Sheathing	Shtg.
Linoleum	Lino.	Shingle	Shgl.
Load Bearing	Ld. Brg.	Sliding Door	Sl. Dr.
		Soffit	Soff.
		Softwood	Swd.
Mahogany	Mhg.	Sprinkler	Spr.
Marble	Mar.	Square Feet	Sq. Ft.
Masonry	Mas.	Stall (Shower)	St.
Medium	Med.	Standard	Std.
Metal	Mtl.	Steel	Stl.
Mezzanine	Mezz.	Storage	Stge.
Modifier	Mod.	Storey	Sty.
Monitor	Mon.	Square Yard	Sq. Yd.
Mud Sill	M. S.	Sub Floor	Sub. Fl.
		Suspended	Susp.
		Swimming Pool	Sw. Pool
Obsolescence	Obse.		
On Centre	O.C.		
Over Tub (Shower)	O.T.		
Overhead Door	O/H. Dr.	Terrazzo	Trzo.
Open Web Steel Joists	O.W.S.J.	Tongue & Grooved	T & G
		Toilet (Water Closet)	W.C.
Paint	Pt.		
Panelling	Panl.		
Parquet	Parq.	Unfinished	Unf.
Partition	Ptn.	Unit Heater	U. Htr.
Pilaster	Pil.	Urinal	Ur.
Plaster	Pl.		
Plastic Laminate	P. Lam.		
Plumbing	Plmb.		
Plywood	Ply.	Veneer	Ven.
Porcelain	Porc.	Vinyl Asbestos Tile	V.A.T.
Precast Concrete	P.C.C.		
Pre-Engineered	Pre. Eng.		
Radiator	Rad.	Wainscoting	Wsct.
Radiant Heat	R.H.	Wallboard	W. Bd.
Redwood	Rd. Wd.	Wallpaper	W. Pap.
Reinforced Concrete	Re. Conc.	Walnut	Wal.
Residence	Res.	Warehouse	Whse.
Room	Rm.	Window	Wdw.
Rustic	Rus.	Wood	Wd.



AVERAGE LIFE TABLES—NORMAL PERCENT GOOD TABLES

The Appraisal Notes for the Assessor outlines the recommended procedure to be followed in developing tables similar to the ones presented in this Section.

It is to be particularly noted, however, that the Percent Good tables in this Handbook are simply illustrations of how such tables should appear and do not reflect rates of depreciation in any specific area in Ontario. The Department does not recommend that they be used as actual tables until they have been substantiated from market data.

General Remarks

- 1) Average Life equals Economic Life.
- 2) Average Life assumes normal maintenance of a structure but no functional obsolescence due to poor design.
- 3) Percent Good is the complement of depreciation --- e.g. depreciation of 60% equals a percent good of 40%.
- 4) Normal Percent Good Tables are designed to measure normal functional obsolescence and normal physical depreciation.

AVERAGE LIFE TABLES

TYPE OF STRUCTURE	CONST. CLASS	QUALITY CLASS			
		1-2	3-4-5	6-7	8-9-10
MULTIPLE RES.	B		50	60	70
	C		50	60	70
	D		50	60	70
RESIDENCE	C		55	60	70
	D	40	55	60	70
MULTI-RES. GARAGES	B		40	50	60
	C		40	50	60
	D		35	45	55
RESIDENCE GARAGES	C		40	50	60
	D		30	40	50
<u>SWIMMING POOLS</u>					
CONCRETE	Average			20	
	Good			30	
VINYL	Average			15	
	Good			20	

NOTE: Residence refers to single family dwellings and detached garages.

When a decimal classification is used (e.g. 5.5), apply the average life for the next whole classification (e.g. 6).

NORMAL PERCENT GOOD TABLES

20 YRS. AV.LIFE			25 YRS. AV.LIFE			30 YRS. AV.LIFE			35 YRS. AV.LIFE			40 YRS. AV.LIFE		
R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD
20	0	100	25	0	100	30	0	100	35	0	100	40	0	100
19	1	94	24	1	95	29	1	96	34	1	99	39	1	98
18	2	88	23	2	90	28	2	93	33	2	97	38	2	96
17	3	81	22	3	86	27	3	89	32	3	95	37	3	94
16	4	75	21	4	81	26	4	86	31	4	93	36	4	92
15	5	69	20	5	77	25	5	82	30	5	91	35	5	90
14	6	63	19	6	72	24	6	79	29	6	89	34	6	87
13	7	59	18	7	68	23	7	75	28	7	87	33	7	84
12	8	57	17	8	63	22	8	71	27	8	85	32	8	82
11	9	54	16	9	60	21	9	67	26	9	83	31	9	80
10	10	50	15	10	57	20	10	64	25	10	80	30	10	77
9	11	48	14	11	55	19	11	60	24	11	78	29	11	74
8	12	46	13	12	53	18	12	59	23	12	75	28	12	72
7	13	43	12	13	51	17	13	57	22	13	72	27	13	70
6	14	40	11	14	49	16	14	55	21	14	69	26	14	67
5	15	36	10	15	46	15	15	53	20	15	66	25	15	65
4	16	32	9	16	44	14	16	52	19	16	63	24	16	62
3	17	28	8	17	42	13	17	50	18	17	60	23	17	60
2	18	24	7	18	40	12	18	48	17	18	57	22	18	59
1	19	20	6	19	36	11	19	46	16	19	54	21	19	58
0	20	0	5	20	33	10	20	43	15	20	51	20	20	56
			4	21	29	9	21	40	14	21	50	19	21	55
			3	22	25	8	22	38	13	22	49	18	22	54
			2	23	23	7	23	36	12	23	47	17	23	53
			1	24	20	6	24	34	11	24	45	16	24	50
			0	25	0	5	25	30	10	25	43	15	25	48
			4	26	27	9	26	41	14	26	56	19	26	46
			3	27	25	8	27	39	13	27	49	18	27	45
			2	28	23	7	28	37	12	28	51	17	28	44
			1	29	20	6	29	35	11	29	53	16	29	43
			0	30	0	5	30	30	10	30	50	15	30	41
			4	31	30	9	31	41	14	31	50	19	31	39
			3	32	27	8	32	39	13	32	49	18	32	37
			2	33	23	7	33	37	12	33	47	17	33	35
			1	34	20	6	34	35	11	34	45	16	34	33
			0	35	0	5	35	30	10	35	43	15	35	30
												4	36	27
												3	37	24
												2	38	22
												1	39	20
												0	40	0

NORMAL PERCENT GOOD TABLES

45 YRS. AV.LIFE			50 YRS. AV.LIFE			55 YRS. AV.LIFE			60 YRS. AV.LIFE			70 YRS. AV.LIFE		
R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD	R.E.L.	EFF AGE	% GOOD
45	0	100	50	0	100	55	0	100	60	0	100	70	0	100
44	1	98	49	1	99	54	1	99	59	1	99	69	1	99
43	2	97	48	2	97	53	2	98	58	2	98	68	2	99
42	3	95	47	3	96	52	3	97	57	3	97	67	3	99
41	4	93	46	4	94	51	4	96	56	4	96	66	4	98
40	5	91	45	5	93	50	5	95	55	5	95	65	5	98
39	6	89	44	6	91	49	6	94	54	6	94	64	6	98
38	7	87	43	7	90	48	7	93	53	7	93	62	8	97
37	8	85	42	8	88	47	8	91	52	8	92	61	9	97
36	9	83	41	9	87	46	9	90	51	9	91	60	10	97
35	10	81	40	10	85	45	10	88	50	10	90	58	12	96
34	11	79	39	11	84	44	11	87	49	11	89	57	13	96
33	12	77	38	12	82	43	12	85	48	12	88	56	14	96
32	13	73	37	13	80	42	13	84	47	13	87	54	16	96
31	14	71	36	14	78	41	14	82	46	14	86	53	17	95
30	15	69	35	15	74	40	15	79	45	15	83	52	18	95
29	16	67	34	16	72	39	16	78	44	16	82	50	20	94
28	17	65	33	17	70	38	17	76	43	17	80	49	21	93
27	18	63	32	18	69	37	18	75	42	18	78	48	22	93
26	19	60	31	19	67	36	19	73	41	19	77	46	24	92
25	20	59	30	20	65	35	20	71	40	20	75	44	26	91
24	21	58	29	21	63	34	21	69	39	21	74	43	27	90
23	22	56	28	22	60	33	22	67	38	22	72	42	28	89
22	23	54	27	23	59	32	23	65	37	23	71	40	30	87
21	24	53	26	24	58	31	24	62	36	24	70	38	32	85
20	25	52	25	25	57	30	25	61	35	25	68	37	33	84
19	26	51	24	26	56	29	26	60	34	26	65	36	34	83
18	27	50	23	27	54	28	27	59	33	27	64	34	36	81
17	28	48	22	28	54	27	28	58	32	28	63	32	38	79
16	29	47	21	29	53	26	29	56	30	30	60	30	40	76
15	30	46	20	30	51	25	30	56	28	32	58	28	42	73
14	31	45	19	31	50	24	31	55	26	34	55	26	44	70
13	32	44	18	32	49	23	32	53	24	36	54	24	46	67
12	33	43	17	33	47	22	33	52	22	38	52	22	48	63
11	34	41	16	34	45	20	35	50	20	40	49	20	50	59
10	35	39	15	35	45	18	37	47	18	42	46	18	52	54
9	36	37	14	36	44	16	39	45	16	44	44	16	54	49
8	37	35	13	37	42	14	41	41	14	46	41	14	56	45
7	38	33	12	38	40	12	43	40	12	48	38	12	58	43
6	39	31	10	40	37	10	45	36	10	50	35	10	60	40
5	40	29	8	42	33	8	47	33	8	52	32	8	62	36
4	41	27	6	44	29	6	49	30	6	54	29	6	64	33
3	42	25	4	46	25	4	51	25	4	56	25	4	66	29
2	43	23	2	48	23	2	53	21	2	58	21	2	68	24
1	44	20	1	49	20	1	54	20	1	59	20	1	69	20
0	45	0	0	50	0	0	55	0	0	60	0	0	70	0



I N - P L A C E C O S T S

R E S I D E N T I A L

G E N E R A L C O M M E N T S

The unit in-place costs shown on the following pages have only been inserted as a guide, and should not be used for a quantity take-off valuation. The intent of this section is to give the assessor an idea of the relationship between materials which is important in the "weighting" process of the classification system.

The unit in-place costs in this section are based on information developed from a base year of 1969.

IN-PLACE COSTS

RESIDENTIAL

FOUNDATIONS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>EXCAVATION:</u>		
Clear Site	Sq. Ft.	\$ 0.05
Strip & Stock Pile	Cu. Yd.	0.55
Bulk Excavation Incl. Disposal	Cu. Yd.	1.00
Trench Excavation Incl. Back-Fill	Cu. Yd.	1.50
Pier or Isolated Excavation Incl. Back-Fill	Cu. Yd.	2.00
<u>CONCRETE FOOTINGS</u>		
Concrete Footings for 6" Thick Wall	Lin.Ft.	0.82
Concrete Footings for 8" Thick Wall	Lin.Ft.	1.12
Concrete Footings for 10" Thick Wall	Lin.Ft.	1.25
Concrete Footings for 12" Thick Wall	Lin.Ft.	2.07
Concrete Footings for 16" Thick Wall	Lin.Ft.	2.42
<u>CONCRETE WALLS (UNREINFORCED)</u>		
Concrete Wall 6" Thick	Sq. Ft.	1.35
Concrete Wall 8" Thick	Sq. Ft.	1.45
Concrete Wall 10" Thick	Sq. Ft.	1.57
Concrete Wall 12" Thick	Sq. Ft.	1.75
Concrete Wall 16" Thick	Sq. Ft.	2.00
<u>CONCRETE WALLS (REINFORCED)</u>		
Concrete Wall 6" Thick	Sq. Ft.	1.57
Concrete Wall 8" Thick	Sq. Ft.	1.75
Concrete Wall 10" Thick	Sq. Ft.	1.95
Concrete Wall 12" Thick	Sq. Ft.	2.25
Concrete Wall 16" Thick	Sq. Ft.	2.70

IN-PLACE COSTS

RESIDENTIAL

FOUNDATIONS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>CONCRETE BLOCK WALL (HOLLOW)</u>		
Concrete Block Wall 4" Thick	Sq. Ft.	\$ 0.62
Concrete Block Wall 6" Thick	Sq. Ft.	0.72
Concrete Block Wall 8" Thick	Sq. Ft.	0.81
Concrete Block Wall 10" Thick	Sq. Ft.	0.90
Concrete Block Wall 12" Thick	Sq. Ft.	1.00
<u>CONCRETE BLOCK WALL (SOLID)</u>		
Concrete Block Wall 4" Thick	Sq. Ft.	0.70
Concrete Block Wall 6" Thick	Sq. Ft.	0.80
Concrete Block Wall 8" Thick	Sq. Ft.	0.90
Concrete Block Wall 10" Thick	Sq. Ft.	1.00
Concrete Block Wall 12" Thick	Sq. Ft.	1.10
<u>CONCRETE FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS (UNREINFORCED)</u>		
Walls 6" Thick	Lin.Ft.	6.30
Walls 8" Thick	Lin.Ft.	7.00
Walls 10" Thick	Lin.Ft.	7.80
Walls 12" Thick	Lin.Ft.	9.10
Walls 16" Thick	Lin.Ft.	10.56
<u>CONCRETE FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS (REINFORCED)</u>		
Wall 6" Thick	Lin.Ft.	7.50
Wall 8" Thick	Lin.Ft.	8.50
Wall 10" Thick	Lin.Ft.	9.58
Wall 12" Thick	Lin.Ft.	11.10
Wall 16" Thick	Lin.Ft.	13.20

IN-PLACE COSTS

RESIDENTIAL

FOUNDATIONS

	<u>UNIT</u>	<u>IN PLACE COST</u>
<u>CONCRETE BLOCK (HOLLOW) FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS</u>		
Walls 6" Thick	Lin.Ft.	\$ 3.70
Walls 8" Thick	Lin.Ft.	4.35
Walls 10" Thick	Lin.Ft.	4.85
Walls 12" Thick	Lin.Ft.	6.05
<u>CONCRETE BLOCK (SOLID) FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS</u>		
Walls 6" Thick	Lin.Ft.	4.10
Walls 8" Thick	Lin.Ft.	4.85
Walls 10" Thick	Lin.Ft.	5.25
Walls 12" Thick	Lin.Ft.	6.50
<u>CONCRETE FOOTINGS FOR COLUMNS (REINFORCED)</u>		
3" x 3" x 1" - SIZE	Each	13.00
4" x 4" x 1" - SIZE	Each	25.00
5" x 5" x 1" - SIZE	Each	32.00
<u>CONCRETE FOR COLUMNS</u>		
	Cu. Yd.	100.00
<u>CONCRETE SLABS ON GRADE</u>		
3" Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.30
4" Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.40
5" Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.50
6" Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.60
7" Conc. Slab with W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.70
E/O GRAVEL FILL UNDER SLAB ON GRADE	Sq. Ft.	0.10

IN-PLACE COSTS

RESIDENTIAL

FOUNDATIONS

<u>CEMENT FINISHING</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
Steel Trowel Finish	Sq. Ft.	\$ 0.06
Broom Finish	Sq. Ft.	0.40
Sidewalk Finish	Sq. Ft.	0.12
Herringbone Finish	Sq. Ft.	0.22
Non Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	0.12
Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	0.12
Metallic Hardener 60 lbs./100 S.F.	Sq. Ft.	0.14
Non Metallic Hardener 60 lbs./100 S.F.	Sq. Ft.	0.14
Coloured Non Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	0.16
<u>WATERPROOFING</u>		
Membrane Waterproofing (1 ply)	Sq. Ft.	0.18
Membrane Waterproofing (2 ply)	Sq. Ft.	0.22
Membrane Waterproofing (3 ply)	Sq. Ft.	0.30
Waterproof Coating	Sq. Ft.	0.05
Metallic Waterproofing	Sq. Ft.	0.20
P.V.C. Waterproofing	Sq. Ft.	0.40
<u>INSULATION</u>		
<u>STYROFOAM ADHERED TO CONCRETE</u>		
1" Thick	Sq. Ft.	0.40
2" Thick	Sq. Ft.	0.55
4" Thick	Sq. Ft.	1.00

I N - P L A C E C O S T S

R E S I D E N T I A L

FOUNDATIONS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>STYROFOAM ADHERED TO CONCRETE PERIMETER FOUNDATION</u>		
1" Thick	Sq. Ft.	\$ 0.45
1½" Thick	Sq. Ft.	0.54
2" Thick	Sq. Ft.	0.63
Building (Asphalt)	Sq. Ft.	0.02
Building Paper (Foil One Side)	Sq. Ft.	0.03
Building Paper (Foil Both Sides)	Sq. Ft.	0.04
Reinf. Waterproof Paper (Asphalt)	Sq. Ft.	0.05

IN-PLACE COSTS

RESIDENTIAL

FLOOR FRAMING - JOISTS

(INCLUDING BRIDGING)

JOIST SIZE	SPACING (o.c.)	GRADE	IN PLACE COST PER SQ. FOOT
2" x 6"	24"	Const.	.18
2" x 8"	24"	Const.	.23
2" x 10"	24"	Const.	.30
2" x 12"	24"	Const.	.37
2" x 6"	16"	Const.	.24
2" x 8"	16"	Const.	.33
2" x 10"	16"	Const.	.35
2" x 12"	16"	Const.	.48
2" x 14"	16"	Const.	.53
2" x 16"	16"	Const.	.64
3" x 14"	16"	Const.	.85

SUB FLOORING

DESCRIPTION	GRADE	PATTERN	IN PLACE COST PER SQ. FOOT
1"x6" or 8"	Const.	Right Angle	\$ 0.27
1"x6" or 8"	Const.	Diagonal	0.30
2"x6" or 8"	Const.	Right Angle	0.26
2"x6" or 8"	Const.	Diagonal	0.29
5/8" Plywood	Const.	--	0.47
3/4" Plywood	Const.	--	0.52

I N - P L A C E C O S T S
R E S I D E N T I A L
FLOORING - FINISHED

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>DOUGLAS FIR - SANDED</u>		
1" x 4" T & G "D" V.G.	Sq. Ft.	\$ 0.45
1" x 4" T & G. "C" V.G.	Sq. Ft.	0.50
ADD for 2 coats Lead & Oil Paint	Sq. Ft.	0.10
ADD for 2 coats Stain	Sq. Ft.	0.08
<u>OAK FLOORING - SANDED AND FINISHED</u>		
5/6" x 1-3/4" Square Edge, Red or White	Sq. Ft.	0.42
#1 Common Plain	Sq. Ft.	0.52
Select Plain	Sq. Ft.	0.60
<u>13/16" x 2-1/4" T & G RED OR WHITE OAK</u>		
First Grade	Sq. Ft.	0.77
Second Grade	Sq. Ft.	0.72
#1 Common	Sq. Ft.	0.65
<u>3/8" x 2-1/4" T & G RED OR WHITE OAK</u>		
First Grade	Sq. Ft.	0.56
Second Grade	Sq. Ft.	0.54
#1 Common	Sq. Ft.	0.50
<u>OAK PARQUETRY FLOORS - SANDED AND FINISHED</u>		
5/16" Thick - Select Grade	Sq. Ft.	0.52
5/16" Thick - Natural Grade	Sq. Ft.	0.50
<u>OAK RANDOM, PLANK FLOORS - SANDED AND FINISHED</u>		
7/8" x 2-1/4" T & G Red or White	Sq. Ft.	1.25-1.75
<u>MAPLE FLOORS - SANDED AND FINISHED</u>		
7/8 x 2-1/4" T & G	Sq. Ft.	0.80-1.20

I N - P L A C E C O S T S

R E S I D E N T I A L

CEILING FRAMING

CEILING JOISTS	SPACING (o.c.)	GRADE	IN PLACE COST PER SQ. FT. OF WALL AREA
2" x 4"	24"	Construction	\$ 0.11
2" x 6"	24"	Construction	0.18
2" x 4"	16"	Construction	0.16
2" x 6"	16"	Construction	0.22

WALL FRAMING - STUDS

(EXTERIOR AND INTERIOR)

STUD SIZE	SPACING (o.c.)	GRADE	IN PLACE COST PER SQ. FT. OF WALL AREA
2" x 3"	16"	Construction	\$ 0.13
2" x 4"	24"	Construction	0.14
2" x 4"	16"	Construction	0.15
2" x 6"	24"	Construction	0.19
2" x 6"	16"	Construction	0.21

I N - P L A C E C O S T S

R E S I D E N T I A L

E X T E R I O R W A L L S

	UNIT PER WALL AREA	IN PLACE C O S T
<u>MISCELLANEOUS EXTERIOR STUCCO FINISH</u>		
Stucco on Masonry with Wire Lath	Sq. Ft.	\$ 0.55
<u>ASBESTOS SHINGLES - 12" x 24" - 250#/</u>	Sq. Ft.	0.30-0.35
<u>REDWOOD SIDING</u>		
1/2" x 4" Economy or Round Edge Bevel	Sq. Ft.	0.42
1" x 6" "B" Rustic or Siding	Sq. Ft.	0.50
1" x 6" Clear Heart Rustic or Siding	Sq. Ft.	0.55
1" x 10" or 12" "B" Rustic or Siding	Sq. Ft.	0.55
<u>DOUGLAS FIR</u>		
1" x 6" "C" Rustic or Siding	Sq. Ft.	0.55
1" x 8" "B" Rustic or Siding	Sq. Ft.	0.54
<u>COMPOSITION SIDING</u>		
Roll Brick Siding	Sq. Ft.	0.10-0.15
Insulating Brick or Stone Siding	Sq. Ft.	0.30-0.35
Masonite Clapboard	Sq. Ft.	0.45-0.60
<u>WOOD SIDING</u>		
Bevel Siding 8" to 10" (Pine)	Sq. Ft.	0.25-0.30
Bevel Siding 8" to 10" (Cedar)	Sq. Ft.	0.25-0.30
Manitoba (Cove) Siding (Spruce)	Sq. Ft.	0.25-0.30
Log Siding (Imitation) (Pine)	Sq. Ft.	0.25-0.35

IN-PLACE COSTS

RESIDENTIAL

EXTERIOR WALLS

<u>SHEATHING</u>	UNIT PER WALL AREA	IN PLACE COST
Construction Grade Horizontal	Sq. Ft.	\$ 0.29
Construction Grade Diagonal	Sq. Ft.	0.31
Construction Grade 1"x6"-12" o.c. Horizontal	Sq. Ft.	0.20
Construction Grade 1"x6"-12" o.c. Diagonal	Sq. Ft.	0.21
Construction Grade 1"x4"- 8" o.c. Horizontal	Sq. Ft.	0.13
1/2" Gypsum Board Asphalt Impregnated	Sq. Ft.	0.16
1/2" Vapour Seal Fibreboard	Sq. Ft.	0.21
3/4" Vapour Seal Fibreboard	Sq. Ft.	0.26

MASONRY VENEER

Common Brick (Concrete, Clay & Sand Lime)	Sq. Ft.	\$ 1.10
Sand Lime Brick	Sq. Ft.	1.20
Clay Face Brick	Sq. Ft.	1.20

METAL SIDING

Painted Aluminum Siding	Sq. Ft.	0.80- 1.00
Painted Steel Siding	Sq. Ft.	0.70- 0.90
Baked Enamel Aluminum Siding	Sq. Ft.	1.20- 1.50
Baked Enamel Steel Siding	Sq. Ft.	1.10- 1.40
Plastic Siding	Sq. Ft.	0.30- 0.50

I N - P L A C E C O S T S

R E S I D E N T I A L

ROOF FRAMING

SIZE OF RAFTER	SPACING (o.c.)	LUMBER QUALITY	COST PER SQ.FT. OF FLAT AREA	"A" FACTOR
2" x 4"	16" o.c.	Const. Grade	\$ 0.25	.29
2" x 4"	24" o.c.	Const. Grade	0.19	.23
2" x 4"	32" o.c.	Const. Grade	0.15	.19
2" x 6"	16" o.c.	Const. Grade	0.26	.29
2" x 6"	24" o.c.	Const. Grade	0.19	.24
2" x 6"	32" o.c.	Const. Grade	0.16	.20
2" x 8"	16" o.c.	Const. Grade	0.34	.30
2" x 8"	24" o.c.	Const. Grade	0.24	.24
2" x 8"	32" o.c.	Const. Grade	0.15	.21

To compute the cost of the frame of the overhanging portion of the roof, apply the figure in column A of the above table to the flat surface square foot area. Costs are to be computed against total sq. ft. of floor area.

ADJUSTMENT TABLE FOR PITCH ROOF

PITCH OF ROOF	1/12	1/11	1/10	1/9	1/8	1/7	1/6	1/5
FACTOR	1.014	1.017	1.02	1.025	1.031	1.04	1.054	1.077
PITCH OF ROOF	1/4	1/3	1/2	5/8	3/4	7/8	Full	
FACTOR	1.12	1.202	1.414	1.601	1.803	2.016	2.236	

IN-PLACE COSTS

RESIDENTIAL

ROOF SHEATHING

SIZE	SPACING	GRADE	COST PER SQ.FT. OF FLAT AREA	"A" FACTOR
1 x 4" or 6"	Solid	Const.	\$ 0.30	.29
1/2" Plywood	Solid	Const.	0.33	.34
5/8" Plywood	Solid	Const.	0.38	.47

To compute the sheathing of the overhanging portion of the roof, apply the figure in column A of the above table to the flat surface square foot area.

ADJUSTMENT TABLE FOR PITCH ROOF

PITCH OF ROOF	1/12	1/11	1/10	1/9	1/8	1/7	1/6	1/5
FACTOR	1.014	1.017	1.02	1.025	1.031	1.04	1.054	1.077

PITCH OF ROOF	1/4	1/3	1/2	5/8	3/4	7/8	Full
FACTOR	1.12	1.202	1.414	1.601	1.803	2.016	2.236

ROOF INSULATIONS

DESCRIPTION	IN PLACE COST PER SQ. FOOT
Aluminum Foil	.08 to .12
Fiberglass	.18 to .22
Foam Glass	.40 to .50
Rockwool	.10 to .14
Rockwool Blown	.05 to .08
1/2 Rigid Fiberboard	.12 to .16
1" Rigid Fiberboard	.18 to .22
2" Rigid Fiberboard	.25 to .30

I N - P L A C E C O S T S

R E S I D E N T I A L
R O O F I N G - C O S T F A C T O R S

DESCRIPTION	COST PER SQ. FT. OF FLAT AREA
ASPHALT COMPOSITION SHINGLES:	
210#/ Square Butt, Strip and 15#/ Felt	0.15
WOOD SHAKES, NATURAL:	
1/2" to 3/4" Cedar	0.48
ADD TO WOOD SHINGLE OR SHAKE COST:	
Predipping Stain - One Coat Stain (Applied in-place)	0.05
ASBESTOS SHINGLES:	
Rigid Asbestos Shingles (Incl. 30#/ Felt)	0.34
CLAY ROOFING TILE:	
Mission Tile (Incl. 30#/ Felt)	0.70
SLATE:	
Imported Slate (Incl. 30#/ Felt)	0.80
METAL ROOFING:	
Corrugated Galvanized Iron 28 ga.	0.18
Corrugated Aluminum	0.18
Sheet Copper (16 ounces)	2.20
BUILT UP ROOFING:	
Tar, Felt and Gravel	0.17

A D J U S T M E N T T A B L E F O R P I T C H R O O F

PITCH OF ROOF	1/6	1/4	1/3	1/2	3/4
FACTOR	1.054	1.12	1.202	1.414	1.803

IN-PLACE COSTS

RESIDENTIAL

EXTERIOR MISC. ITEMS

<u>ROOF FLASHING</u>	<u>UNIT</u>	<u>IN PLACE COST</u>
Aluminum	Sq. Ft.	\$ 0.75
Copper Flashing	Sq. Ft.	1.35
G.I. Sheet	Sq. Ft.	0.60
<u>GUTTERS AND DOWNSPOUTS</u>		
<u>GUTTERS</u>		
26 Gauge Galvanized Iron Painted	Lin.Ft.	0.90
16 Ounce Copper	Lin.Ft.	1.25
Aluminum	Lin.Ft.	0.70
<u>DOWNSPOUTS</u>		
26 Gauge Galvanized Iron Painted	Lin.Ft.	0.80
16 Ounce Copper	Lin.Ft.	1.25
Aluminum	Lin.Ft.	0.70

IN-PLACE COSTS

RESIDENTIAL

WINDOWS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>WOOD WINDOWS</u>		
STATIONARY WINDOWS		
Single Glazed Size up to 10 Sq. Ft.	Sq. Ft.	\$ 2.70
Single Glazed Size up to 16 Sq. Ft.	Sq. Ft.	2.50
Single Glazed Size up to 25 Sq. Ft.	Sq. Ft.	2.30
Single Glazed Size above 25 Sq. Ft.	Sq. Ft.	2.10
NOTE: For Double Glazing ADD 0.40 per Sq. Ft.		
<u>SASHLESS WINDOWS</u>		
Single Glazed Size up to 10 Sq. Ft.	Sq. Ft.	\$ 3.50
Single Glazed Size up to 16 Sq. Ft.	Sq. Ft.	3.30
Single Glazed Size up to 25 Sq. Ft.	Sq. Ft.	3.10
Single Glazed Size above 25 Sq. Ft.	Sq. Ft.	3.00
NOTE: For Double Glazed ADD 0.50 per Sq. Ft.		
<u>VINYL SASHLESS WINDOWS</u>		
Single Glazed Size up to 10 Sq. Ft.	Sq. Ft.	\$ 3.65
Single Glazed Size up to 16 Sq. Ft.	Sq. Ft.	3.45
Single Glazed Size up to 25 Sq. Ft.	Sq. Ft.	3.25
Single Glazed Size above 25 Sq. Ft.	Sq. Ft.	3.10
NOTE: For Double Glazed ADD 0.50 per Sq. Ft.		
<u>DOUBLE HUNG WINDOWS</u>		
Single Glazed Size up to 10 Sq. Ft.	Sq. Ft.	\$ 4.00
Single Glazed Size up to 16 Sq. Ft.	Sq. Ft.	3.80
Single Glazed Size up to 25 Sq. Ft.	Sq. Ft.	3.60
Single Glazed Size above 25 Sq. Ft.	Sq. Ft.	3.50
NOTE: For Double Glazed ADD 0.60 per Sq. Ft.		

IN-PLACE COSTS

RESIDENTIAL

WINDOWS

<u>WOOD WINDOWS (cont'd)</u>	<u>UNIT</u>	<u>IN PLACE COST</u>
Basement Windows - Single Glazed	Sq. Ft.	\$ 1.75
Basement Windows - Double Glazed	Sq. Ft.	2.20
Casement Windows	Sq. Ft.	3.50 - 5.00
<u>ALUMINUM WINDOWS</u>		
Stationary Windows - Single Glazed	Sq. Ft.	\$3.00 - 4.00
Stationary Windows - Double Glazed	Sq. Ft.	4.00 - 5.00
NOTE: ADD FOR PLATE GLASS	Sq. Ft.	0.70
ADD FOR VENTED AREA	Each	20.00
<u>STEEL WINDOWS</u>		
Stationary Windows - Single Glazed	Sq. Ft.	\$2.75 - 3.75
Stationary Windows - Double Glazed	Sq. Ft.	\$3.75 - 4.75
NOTE: ADD FOR PLATE GLASS	Sq. Ft.	0.70
ADD FOR VENTED AREAS	Each	17.00

IN-PLACE COSTS

RESIDENTIAL

DOORS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>FRONT DOOR</u>		
BC Fir 3'0" x 6'8", 1-3/4" Thick, 6 Panel Stock; D.F. Frame, Oak Sill & Threshold, D.F. Casing One Side, Painted	Each	\$60.- 70.
<u>MORE ELABORATE FRONT DOORS</u>		
BC Fir	Each	Up to 80.
Philippine Mahogany	Each	50.- 70.
Oak Veneer	Each	70.- 90.
<u>MORE ELABORATE FRONT DOOR FRAMES ADD</u>	Each	40.- 120.
<u>REAR DOOR</u>		
BC Fir 2'8" x 6'8", 1 3/4" Hollywood BC Fir Frame and Sill; D.F. Casing 1 Side, Painted	Each	\$60.- 70.
<u>WEATHERSTRIPPING - EXTERIOR ENTRANCES</u>		
1-3/4" Wide Bronze Sill and Copper Jambs	Each	15.
5" Wide Bronze Sill and Copper Jambs	Each	20.
<u>SPECIAL FRONT DOORS AND FRONT DOOR FRAMES</u>	Each	Up to 400.
Costs are for 2'8" x 6'8", 1-3/8" Thick Stock Doors, Frame and Casing 2 Sides, Painted Coats		
<u>BC FIR DOOR</u>		
One Panel	Each	\$ 35.
Two Panel Flat Veneer	Each	35.
Three Panel Flat	Each	35.
Five Cross Panel Colonial	Each	45.
Four Vertical Panel Raised	Each	45.
Six Vertical Panel Raised	Each	50.

IN-PLACE COSTS

RESIDENTIAL

DOORS

<u>BC FIR DOOR (CONT'D.)</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
French Door - Five Lights	Each	\$ 55.
French Door - Ten Lights	Each	60.
French Door - Fifteen Lights	Each	65.
<u>MIRROR DOOR, PLAIN 2' x 6' x 1/4" PLATE GLASS</u>		
Mirror	Each	70.
Beveled	Each	80.
<u>PHILIPPINE MAHOGANY DOOR</u>		
Flush, Hollow Core	Each	40.
Flush, Solid Core	Each	55.
Gum, Flush, Hollow Core, Unselected	Each	40.
Ash, Flush, Hollow Core, Unselected	Each	42.
Birch, Flush, Hollow Core, Unselected	Each	45.
FOR 1-3/4" THICK DOORS ADD TO EACH OF ABOVE	Each	5.
<u>LAUAN</u>		
Flush, Hollow Core	Each	20.
<u>MASONITE</u>		
Flush, Hollow Core	Each	16.

IN-PLACE COSTS

RESIDENTIAL CABINETS AND BUILT-IN FITMENTS

	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>KITCHEN BASE CABINETS (not incl. sink or drain board)</u>		
Douglas Fir, 3 coats of paint	Lin.Ft.	\$17..- 19.
Chip Board, Birch Veneer, Finished	Lin.Ft.	20..- 27.
Chip Board, Mahogany Veneer, Finished	Lin.Ft.	22..- 28.
Chip Board, Walnut Veneer, Finished	Lin.Ft.	30..- 37.
Steel (incl. enamel top, sink fixtures and plumbing connections)	Lin.Ft.	45..- 60.
Steel (incl. black top but no sink unit)	Lin.Ft.	32..- 55.
<u>KITCHEN WALL TYPE CABINETS (20"-24" high) two shelves</u>		
Douglas Fir, 3 coats of paint	Lin.Ft.	\$ 9..- 12.
Chip Board, Birch Veneer, Finished	Lin.Ft.	14..- 20.
Chip Board, Mahogany Veneer, Finished	Lin.Ft.	20..- 25.
Chip Board, Walnut Veneer, Finished	Lin.Ft.	22..- 30.
<u>KITCHEN WALL TYPE CABINETS (30"-36" high) three shelves</u>		
Douglas Fir, 3 coats of paint	Lin.Ft.	\$10..- 14.
Chip Board, Birch Veneer, Finished	Lin. Ft.	15..- 20.
Chip Board, Mahogany Veneer, Finished	Lin.Ft.	20..- 25.
Chip Board, Walnut Veneer, Finished	Lin.Ft.	22..- 30.
<u>DRAIN BOARDS</u>		
Linoleum Drain	Lin.Ft.	\$ 5..- 7.
Tile Drain, Splash and Ends	Lin.Ft.	7..- 9.
Formica or Arborite with 4"-8" Splash	Lin.Ft.	7..- 12.
NOTE: Kitchen Base Cabinets other than Steel should be computed by measuring entire length including sink space.		
Steel Kitchen Cabinets are segregated into units with & without the sink.		

IN-PLACE COSTS

RESIDENTIAL

<u>WALL FINISHES - KITCHEN AND BATH</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
<u>WAINSCOT (DADO)</u>		
Linowall	Sq. Ft.	\$0.75 - 0.85
Enamelled Imitation Tile Wallboard	Sq. Ft.	0.90 - 1.05
Ceramic Tile Glazed (Mortared)	Sq. Ft.	1.50 - 2.50
<u>VITROLITE</u>		
1/4" Black and White	Sq. Ft.	1.30 - 1.50
1/4" Coloured	Sq. Ft.	1.40 - 1.60
<u>CLAY TILE</u>	Sq. Ft.	1.50 - 2.00
<u>FLOOR FINISHES - KITCHEN AND BATH</u>		
<u>LINOLEUM</u>		
Prints	Sq. Ft.	0.35 - 0.45
Linoleum Inlaid, Standard	Sq. Ft.	0.40 - 0.55
Linoleum 1/8" (Battleship)	Sq. Ft.	0.65 - 1.00
<u>TILE</u>		
Vinyl Asbestos 1/16"	Sq. Ft.	0.25 - 0.35
Vinyl Asbestos .08"	Sq. Ft.	0.30 - 0.40
Vinyl 1/8"	Sq. Ft.	0.70 - 0.80
Vinyl Plastic .08"	Sq. Ft.	0.70 - 0.80
Vinyl Plastic 1/8"	Sq. Ft.	0.80 - 0.90
Cork Tile 1/16"	Sq. Ft.	0.70 - 0.80
Rubber Tile 3/32"	Sq. Ft.	1.00 - 1.20
Rubber Tile 1/8"	Sq. Ft.	0.80 - 1.00
<u>TERRAZZO</u>	Sq. Ft.	1.00 - 1.20
<u>MARBLE 7/8"</u>		
Light Beige (Italian and Georgian)	Sq. Ft.	4.00 - 5.00
White	Sq. Ft.	4.00 - 5.00
Mixed Colours with Black	Sq. Ft.	5.00 - 7.00
<u>SLATE</u>	Sq. Ft.	4.00 - 5.00

I N - P L A C E C O S T S

R E S I D E N T I A L

I N T E R I O R W A L L L I N I N G S

	<u>U N I T</u>	<u>I N P L A C E C O S T</u>
Plaster on Gypsum Lath	Sq. Ft.	\$ 0.50
Plaster on Metal Lath	Sq. Ft.	0.60
Ornamental Plaster on Gypsum Lath	Sq. Ft.	0.70-1.00
Ornamental Plaster on Metal Lath	Sq. Ft.	0.80-1.10
Plaster on Masonry	Sq. Ft.	0.45
ADD: for Acoustical Spray on Plaster	Sq. Ft.	0.12
Drywall	Sq. Ft.	0.33
Drywall with Sprayed Finish	Sq. Ft.	0.45
Sheetrock	Sq. Ft.	0.28
Sheetrock Taped	Sq. Ft.	0.33
1/8" Masonite (Hardboard) Plain	Sq. Ft.	0.18
1/8" Masonite (Hardboard) Prefinished	Sq. Ft.	0.22-0.50
1/4" Plywood	Sq. Ft.	0.31
3/8" Plywood	Sq. Ft.	0.39
1" Knotty Pine T & G	Sq. Ft.	0.30
1" Cedar T & G	Sq. Ft.	0.38
1/4" Teak Plywood	Sq. Ft.	0.60
1/4" Mahogany Plywood "Lavan"	Sq. Ft.	0.28
1/4" Mahogany Plywood "African"	Sq. Ft.	0.46
1/4" Walnut Plywood	Sq. Ft.	0.45
1/4" Birch Plywood	Sq. Ft.	0.42
Plastic Laminated	Sq. Ft.	0.80-1.10

IN-PLACE COSTS

RESIDENTIAL

INTERIOR DECORATING

<u>PAINTING</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
Paint on Wood	Sq. Ft.	\$ 0.10
Paint on Plaster or Drywall - Flat Finish	Sq. Ft.	0.10
Paint on Plaster or Drywall - Glossy Finish	Sq. Ft.	0.13
Paint on Concrete or Concrete Block	Sq. Ft.	0.12
Paint on Concrete or Concrete Block with Filler	Sq. Ft.	0.18
Paint on Steel	Sq. Ft.	0.11
Paint Wood Doors	Each	8.00
Paint Metal Doors	Each	9.00
Paint Wood or Steel Windows (Net Area of Opening)	Sq. Ft.	0.10
<u>WALL PAPER</u>	Sq. Ft.	0.40-0.70
<u>VINYL WALL COVERING</u>	Sq. Ft.	0.50-1.00
<u>SPECIAL FINISH</u>		
Epoxy Paint	Sq. Ft.	0.16
Plastic Coating	Sq. Ft.	0.30-0.40
Stain or Varnish	Sq. Ft.	0.15-0.20

IN-PLACE COSTS

RESIDENTIAL

ELECTRICAL - WIRING AND FIXTURES

When other than specific electric wiring is used, adjust the cost by use of the following table.

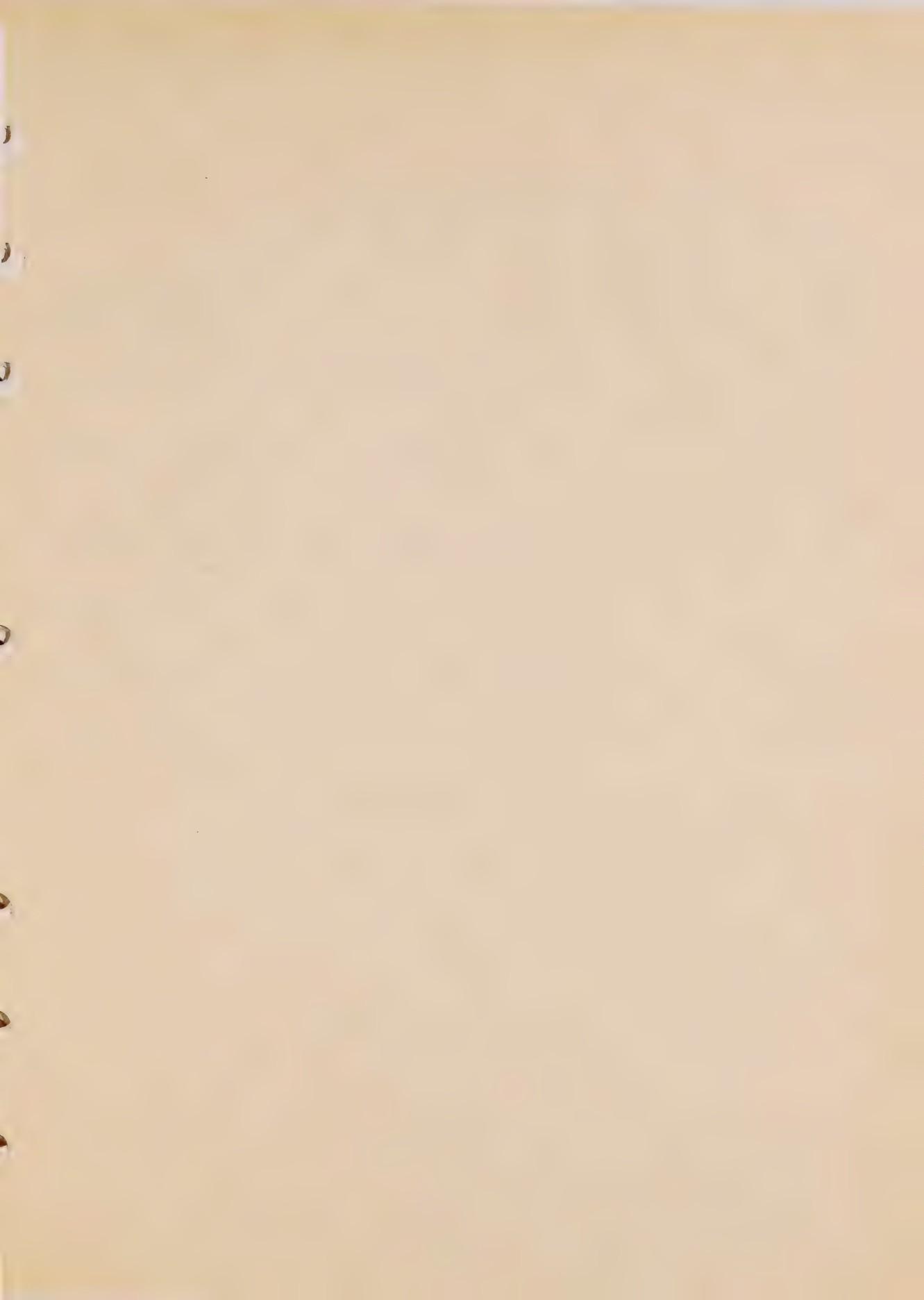
WIRING COST

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>IN PLACE COST</u>
Romex - Non-metallic Sheathed Cable	Outlet	\$ 11.50
*B.X - Armoured Cable	Outlet	14.00
Rigid Metal Conduit	Outlet	23.00

*Use this rate for Knob and Tube wiring.

NOTE: Each electric light or convenience outlet and each switch is counted as an outlet.

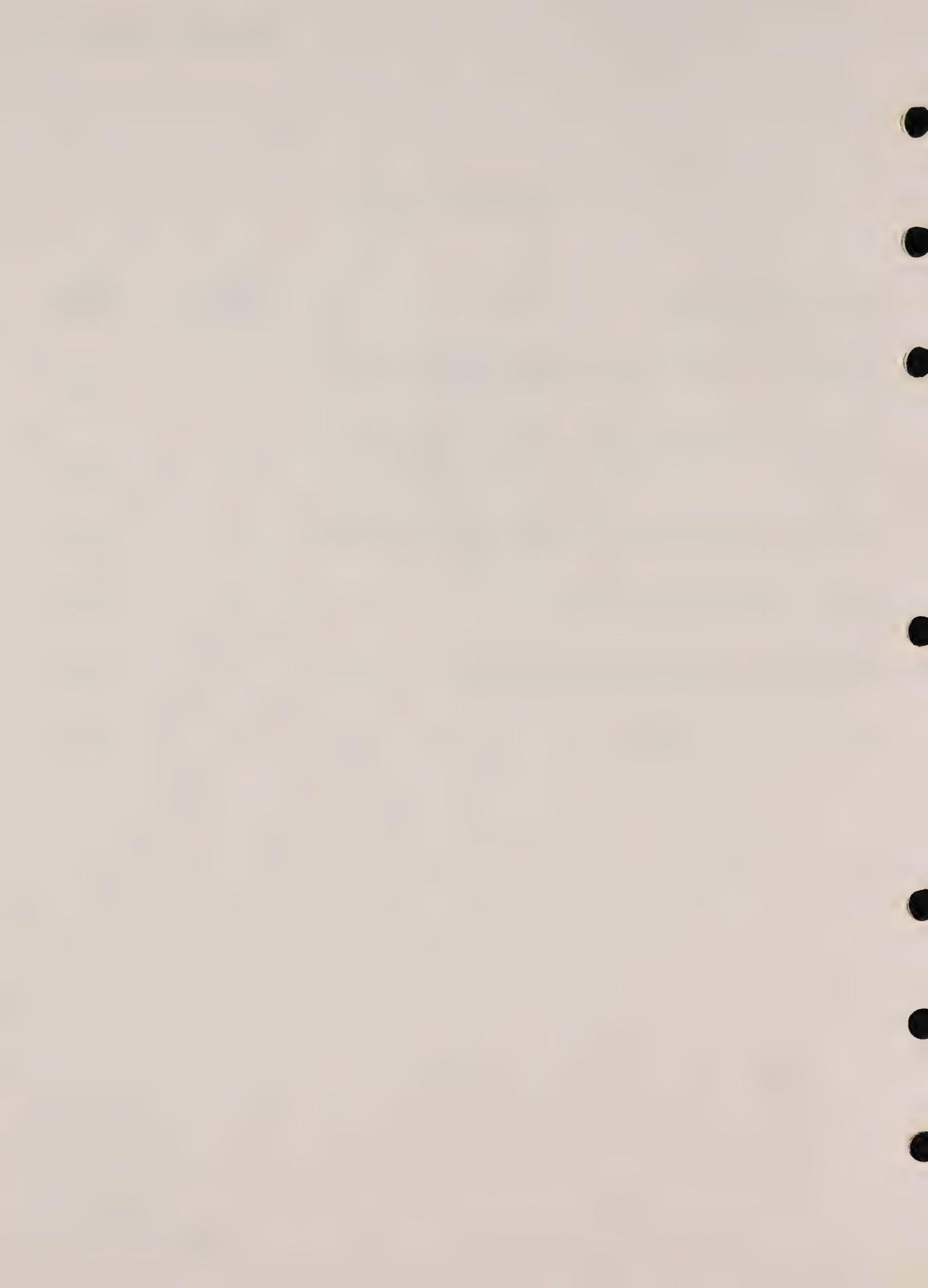
When other than the specified lighting fixture allowance is used, determine the difference in a lump sum, which may be converted to a cost per square foot of the building floor area.





COMMERCIAL

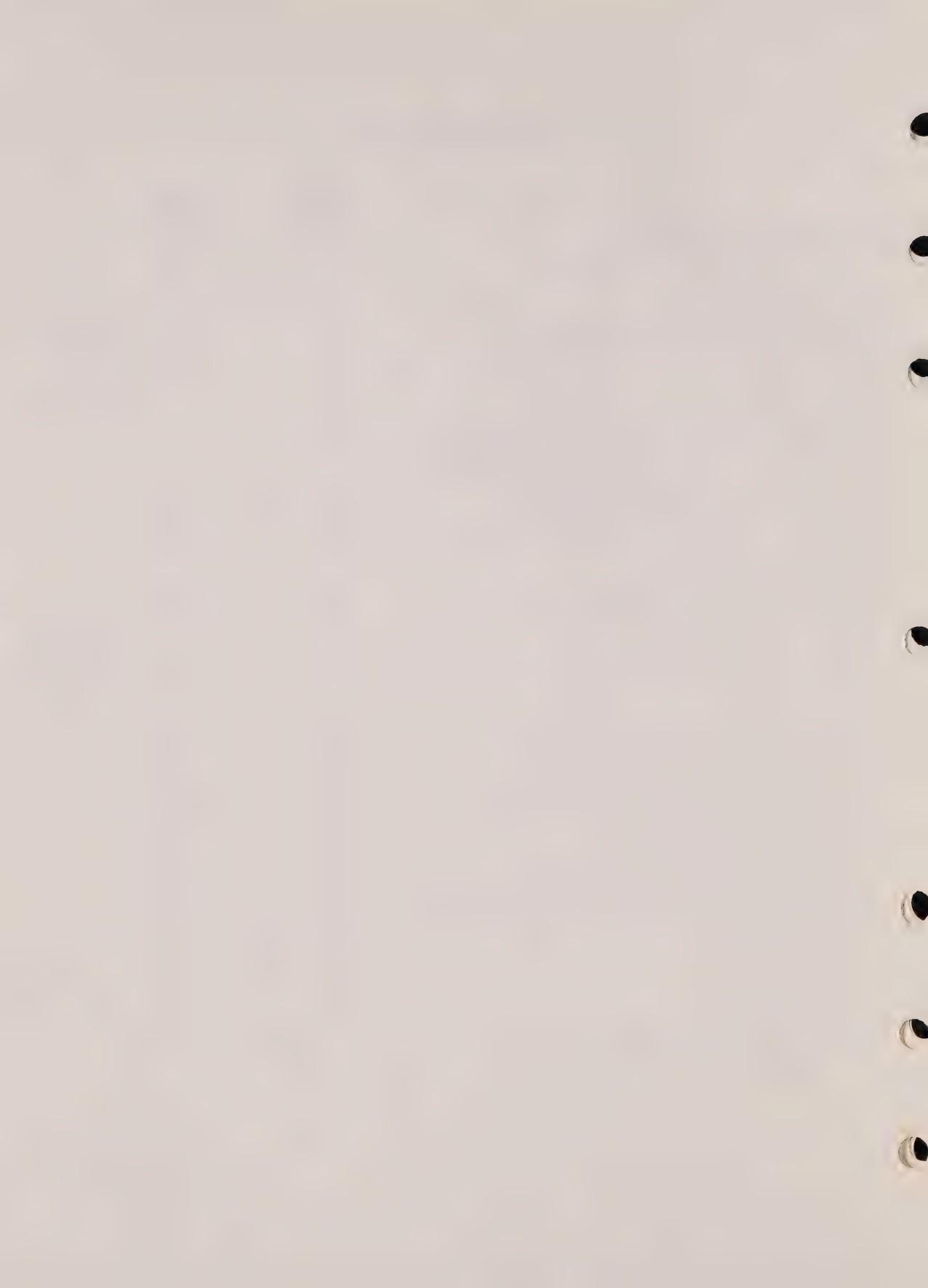
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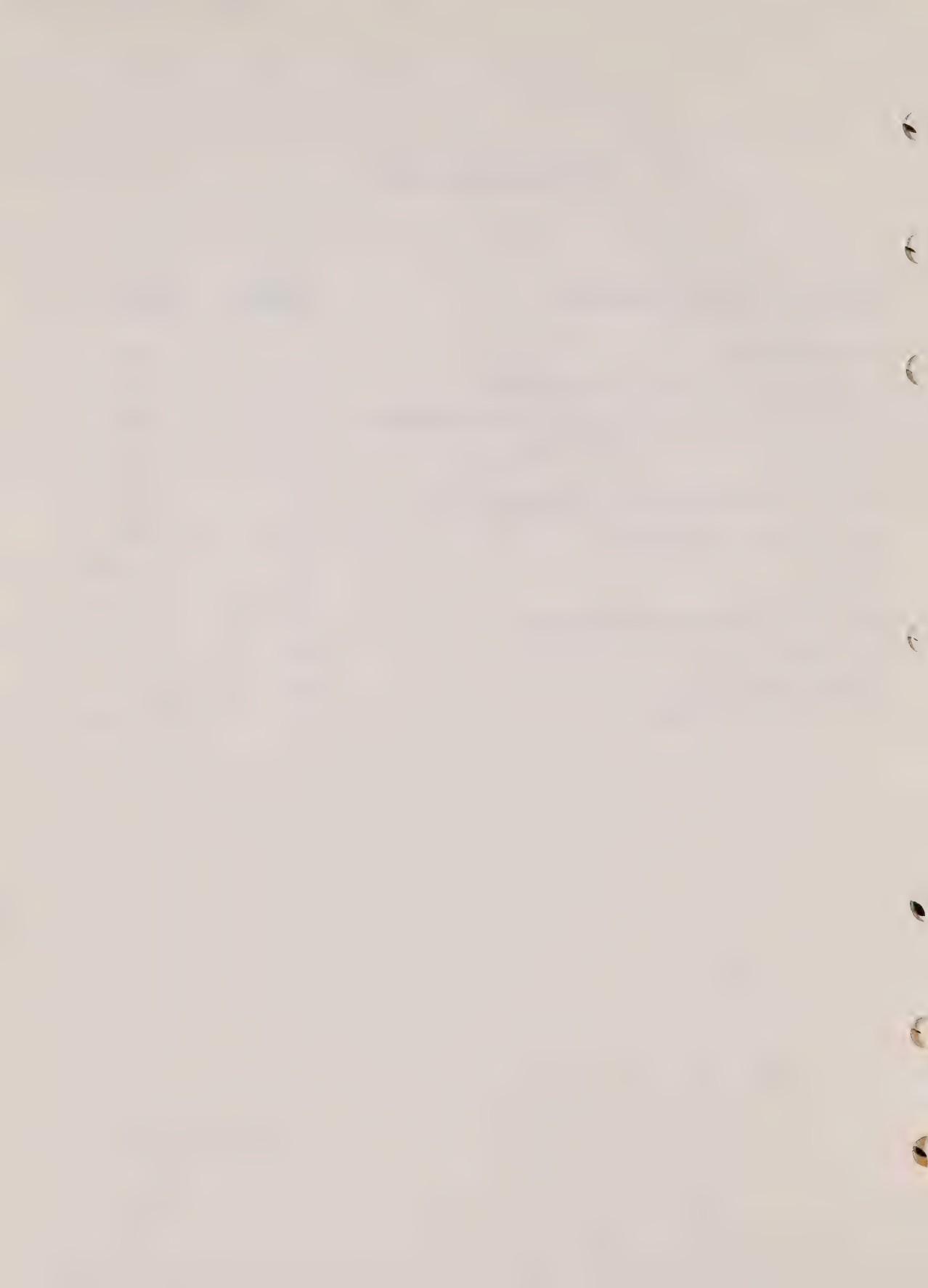
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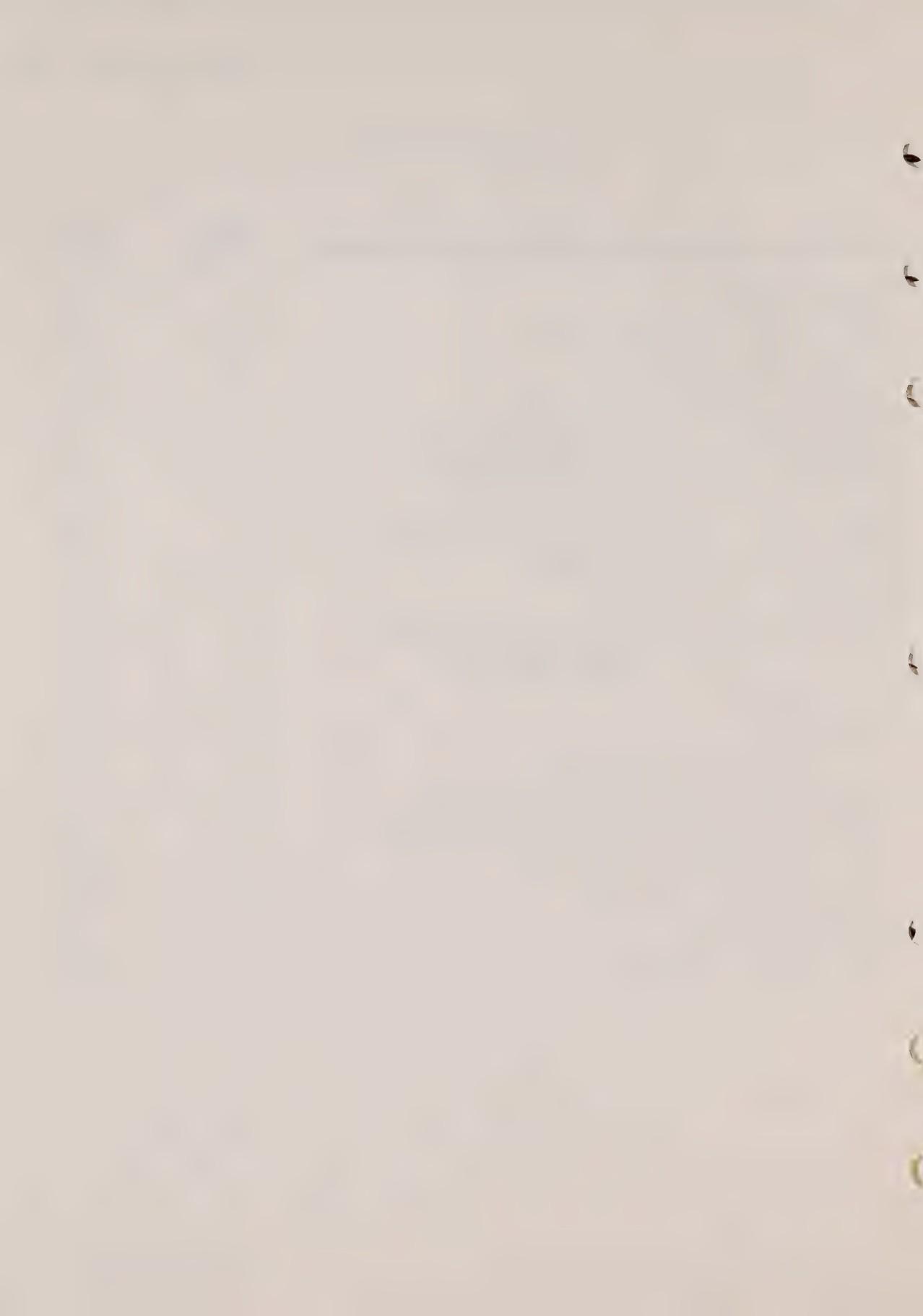
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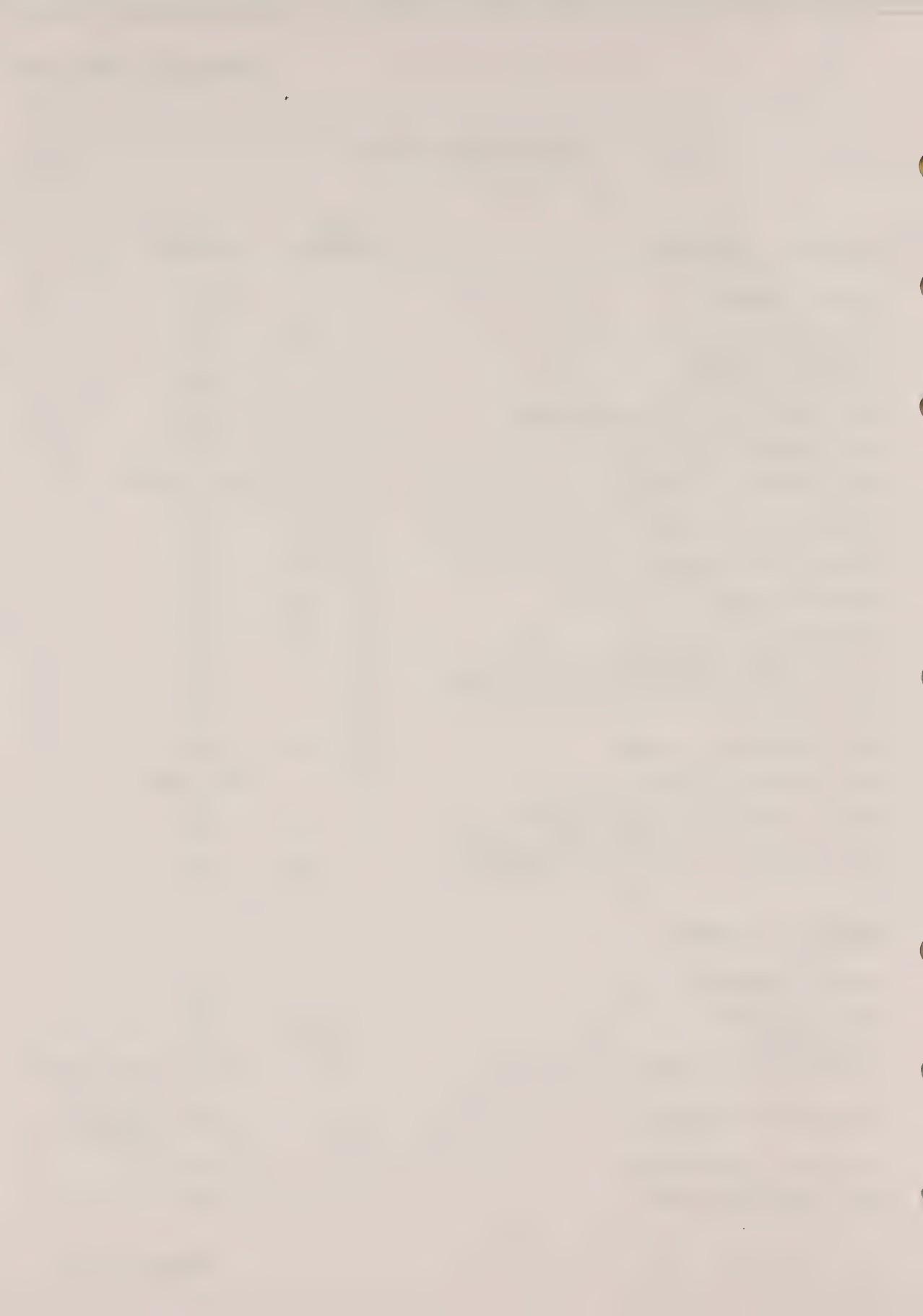


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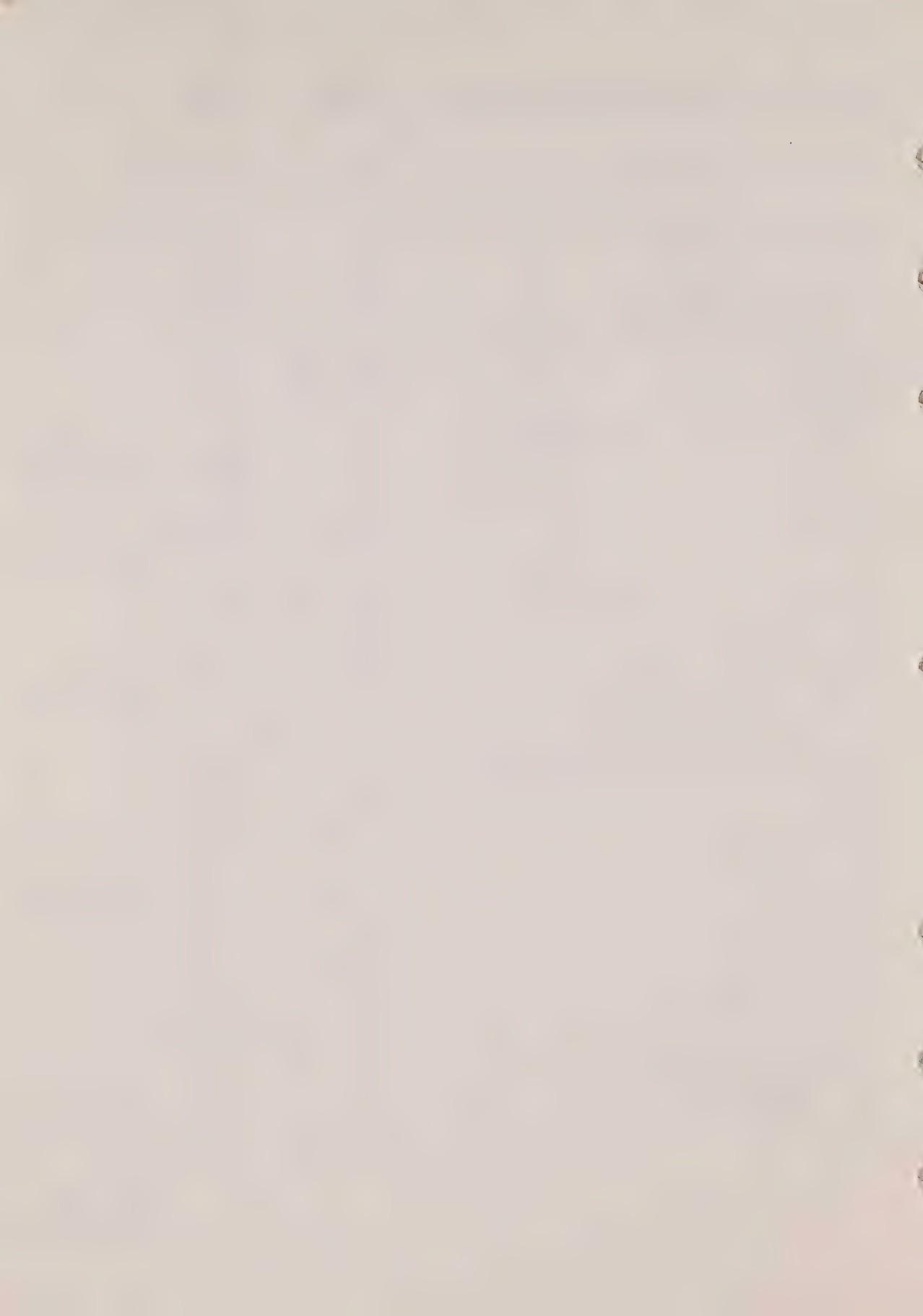
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<u>SECTION 9C - MISCELLANEOUS STRUCTURES</u>	<u>Page Number</u>	<u>Date Issued</u>
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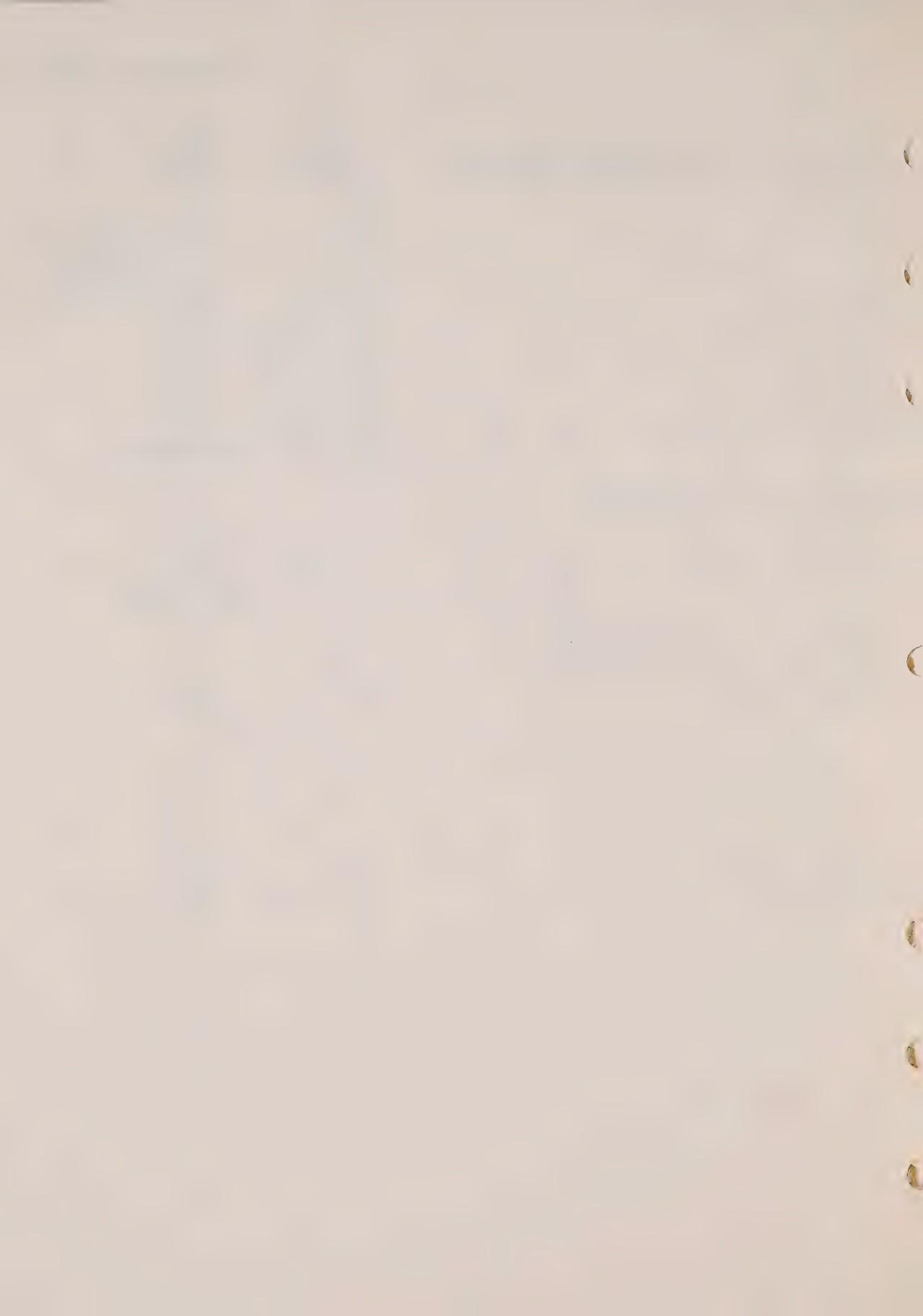
SECTION 10C - LIFE TABLES

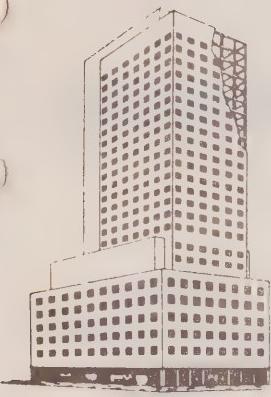
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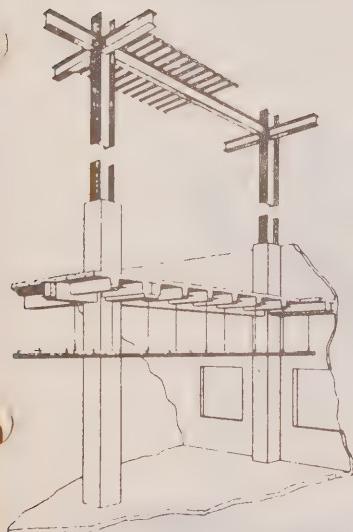
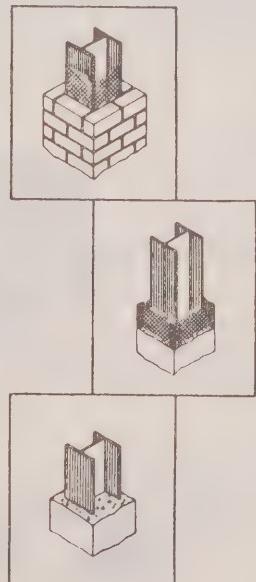




Class A Buildings

The primary feature of Class A buildings is the fireproofed structural steel frame, which may be welded, bolted, or riveted together. The fireproofing may be masonry, poured concrete, plaster, sprayed asbestos, or any other type which will give a high fire-resistant rating.

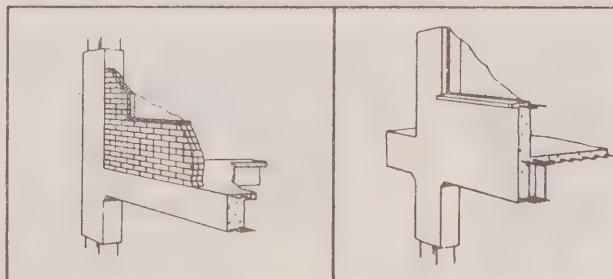
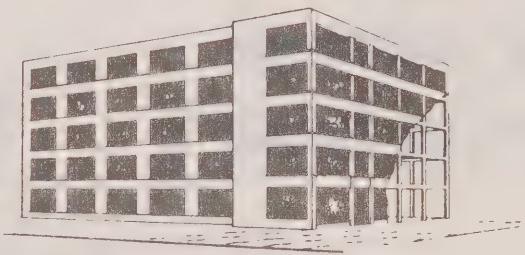
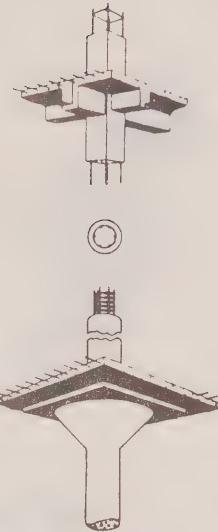
Floors and roof in Class A structures are normally reinforced concrete on steel decking or formed slabs resting on the frame or poured so as to become integral with it. Exterior walls will be cavity or curtain walls of masonry, concrete, or one of the many types of panels of metal, glass, concrete, and other materials. Interior partitions will frequently be of masonry or gypsum block although more and more movable and light weight partitions are being used in newer buildings.



Class B Buildings

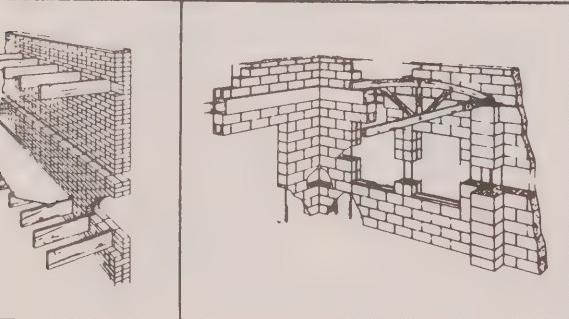
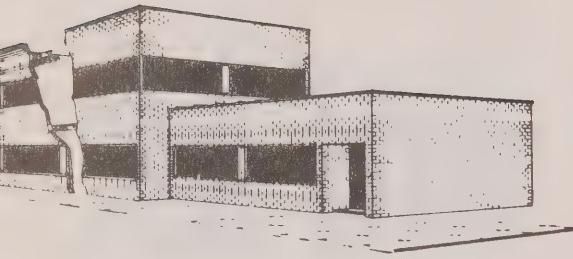
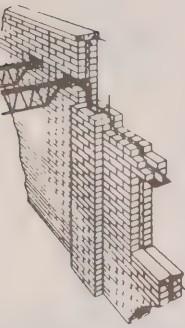
The primary characteristic of a Class B building is the reinforced concrete frame in which the columns and beams can be either formed or precast concrete.

Floors and roof in Class B structures are formed or precast concrete slabs and the exterior walls will generally be masonry or reinforced concrete cavity walls or any of the many types of curtain wall panels, of concrete, metal, glass or stone. In some cases in a Class B building, the walls may be partially load-bearing. Interior partitions are often masonry, reinforced concrete or gypsum block, but in newer buildings many lightweight and movable partitions are used.



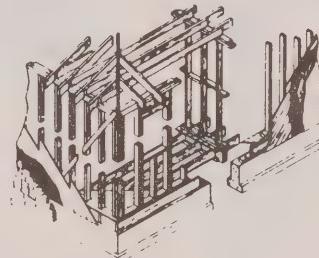
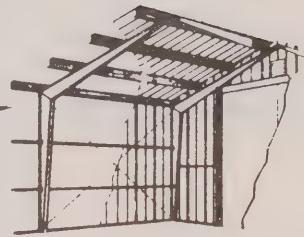
Class C Buildings

Class C buildings are characterized by masonry or reinforced concrete (including tilt-up) construction. The walls may be load-bearing, i.e., supporting roof and upper floor loads or non-bearing with concrete, steel, or wood columns, bents or arches supporting the load. Floors and roofs are supported on wood or open steel joists or trusses or the floor may be a concrete slab on the ground. Bearing walls are frequently strengthened by concrete bond beams and pilasters.

**Class D Buildings**

Class D buildings are characterized by non-fireproof construction and wood or steel framed exterior walls. The exterior walls may be made up of closely spaced wood or steel studs as in the case of a typical wood-framed house, with an exterior covering of wood, shingles, stucco, brick or stone veneer, or other materials, or they may consist of a skeleton wood or open steel frame on which some form of sheet siding is applied, as in the standard prefabricated metal buildings.

Class D is further used to include all buildings that do not fit into any other classification, however, special buildings such as service stations, greenhouses, etc. will be found in the special cost sections of the manual.



COMMERCIAL - INDUSTRIAL SHAPE CLASSIFICATION FACTORS

Rectangular structures should be classified as follows:

<u>Width to Length Ratio</u>	<u>Shape Classification</u>
Up to 1:2	A
1:2 to 1:4	B
1:4 and over	C

Structures having irregular perimeters and many corners should be classified similar to residential properties as shown in Section 1, page 35.

#####

COMMERCIAL - INDUSTRIAL AREA ADJUSTMENT

Most design type structures described in this Section show replacement cost factors predicated on a base area. The appropriate area adjustment tables usually follow the cost factor tables.

Where tables are omitted, refer to the tables in Section 7-C, pages 4 and 5, for proper area adjustment.

#####

MULTI - STOREY BUILDINGS

To determine cost factors for upper storeys of multiple storey buildings (assuming same general character and use) ADD to the second storey cost factor as follows:

Third Storey	-	2%
Fourth Storey	-	4%
Fifth Storey	-	6%

HEIGHT ADJUSTMENT

Methods of Determining Height

- (a) Single Storey Structure (with Flat Roof):
Height measurement is taken from the bottom of the floor structure to the top of the ceiling joists.
- (b) Single Storey Structure (with Gable, Gambrel or Saw-tooth Type Roof):
Height measurement is average of distance from the bottom of the floor structure to the eave and to the ridge.
- (c) Single Storey Structure (with Monitor Type Roof):
Height measurement is determined by ADDING: Volume of the Monitor Sq.Ft. area of structure to the height arrived at as in (a) or (b).
- (d) Multiple Storey Structure:
Height measurement includes for each individual storey that measurement taken from floor surface to floor surface as well as the floor structure of the first storey.

NOTE: All measurements are calculated to the closest foot.

#

ADJUSTMENTS

Most design type structures described in this Section show replacement cost factors predicated on a specific height. For each foot of variation of height, adjust the unit costs by using the following percentages:

Shell Type Building with Unfinished Interior	-	3%
Shell Type Building with Finished Interior	-	2½%
Cut-Up Building with Finished Interior	-	2%

PARTY WALL OR MISSING WALL ADJUSTMENT

PARTY WALL - A wall erected between two properties in which each owner has a common right of use.

MISSING WALL - A term used to describe a section of the perimeter wall that is either:

- (a) a wall of a structure which has been or will be costed with the adjoining structure.
- (b) a wall of an adjoining structure under separate ownership in which the subject structure has no vested interest.

When either of the above situations are encountered in costing Industrial or Commercial structures, use the following procedure to calculate the percentage of adjustment to be deducted from the square foot cost factor as determined, after any necessary area and height adjustments have been made.

FINISHED BUILDINGS - (such as stores, offices, etc.)

$$(a) \text{ Party Wall Percentage Adjustment} = \frac{\text{Party Wall Length}}{\text{Total Perimeter}} \times 12\%$$

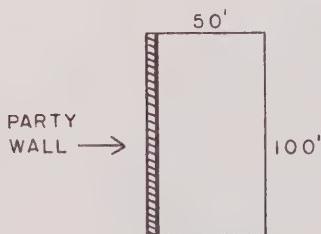
$$(b) \text{ Missing Wall Percentage Adjustment} = \frac{\text{Missing Wall Length}}{\text{Total Perimeter}} \times 18\%$$

UNFINISHED BUILDINGS - (such as factories, warehouses, etc.)

$$(c) \text{ Party Wall Percentage Adjustment} = \frac{\text{Party Wall Length}}{\text{Total Perimeter}} \times 15\%$$

$$(d) \text{ Missing Wall Percentage Adjustment} = \frac{\text{Missing Wall Length}}{\text{Total Perimeter}} \times 22.5\%$$

EXAMPLE - Finished Building with 100 ft. Party Wall



$$\text{Party Wall Length} \quad \frac{100'}{300'} \times 12\% = 4\%$$

∴ allowance to be deducted is 4% of rate for 100' of party wall.

FRAMESDEFINITION

Frames are independent structures which hold up the floors and roof of a building. In many cases they will also support or brace the walls.

BOND BEAMS

Masonry walls also may be strengthened by horizontal concrete beams bonded in the bricks with concrete, hence "bond beams".

BEARING WALLS AND PARTITION

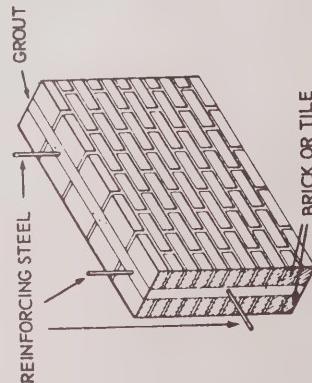
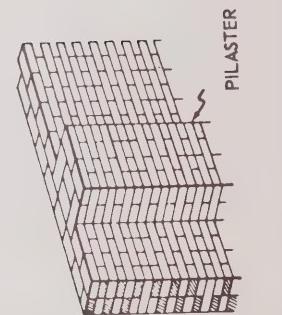
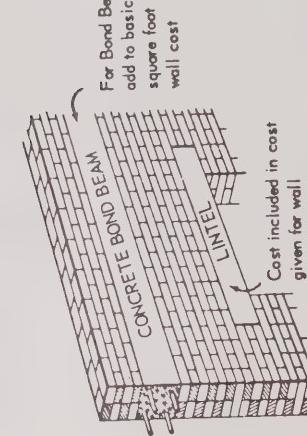
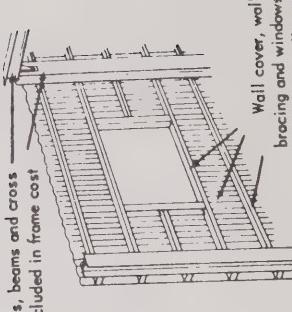
A bearing wall is so constructed as to support itself as well as bear the weight of the floors or roof above. In addition, in many buildings such as residences and small commercial buildings, the interior walls will also aid in supporting the roof and floors.

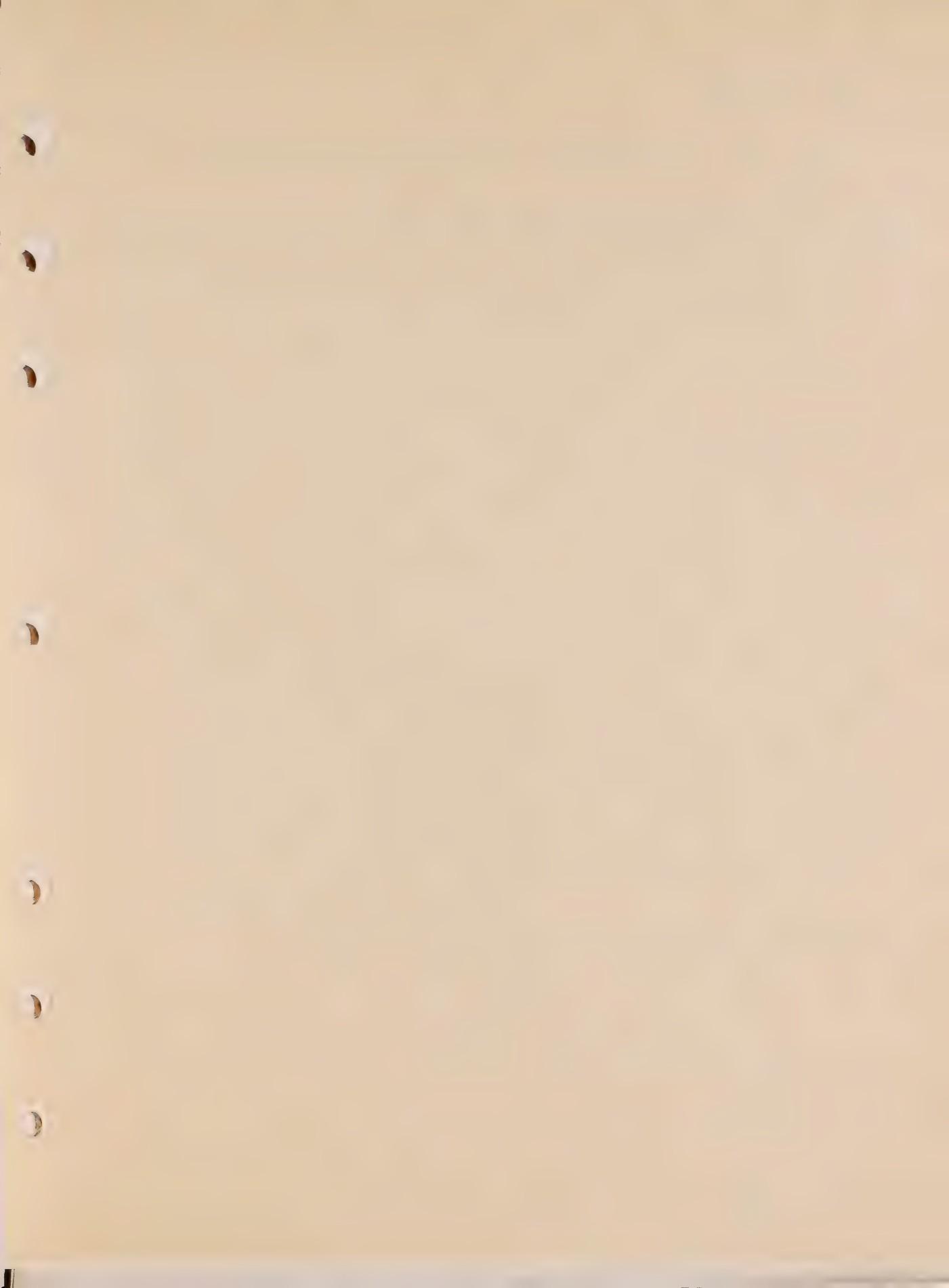
PILASTERS

Brick and concrete walls are often strengthened with added thicknesses forming columns at intervals. Often the roof trusses will bear on these columns or pilasters.

OPEN FRAMES

This is the opposite to the bearing wall, in that an independent frame completely supports the floors and roof and if all walls and partitions were removed, the skeleton would still stand. This frame consists of the posts, columns, spandrels, bracing, etc., used to support the upper floors and the roof but which are not a part of the wall, floor, or roof structure.





GENERAL INDUSTRIAL COMMENTS

Specifications follow for two basic industrial type structures, namely, load-bearing and structural steel. In estimating the costs of load-bearing industrial structures, the load-bearing partitions are included in the basic cost factors. With regard to buildings constructed with structural steel, the basic steel framing and exterior curtain walls are considered in the cost factors, but any superfluous masonry partitions must be cost separately.

In classifying industrial structures, the specifications prepared do not differentiate between typical warehouse construction and standard manufacturing. Although the general basic structures are usually similar, there are substantial differences in the intensity of electrical lighting, strength of floor structure, and the requirements of natural lighting. In classifying warehouses, the basic structural components as described in the specifications are relevant; however, a larger number of doors are usually found, windows are minimal or non-existent, electrical wiring and lighting is less intensified, so less costly, and the floor structure is not usually as heavily reinforced. As warehouses demand greater flexibility for moving stored articles, greater heights are required, thus the cost factors are predicated on greater heights of structure.

The specifications and cost factors included in this section are based on information developed from a base year of 1969.

Additive cost factors which are common to many industrial structures are included in this section.

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS	8" masonry or concrete walls below frost line with adequate footings.	10" masonry or concrete walls below frost line; footings as req'd by Nat. Bldg. Code.	10-12" masonry or reinforced con walls below frost line; footings as req'd by Nat. Bldg. Code.
FLOOR STRUCTURE	4" concrete slab.	4" reinforced concrete slab on gravel fill.	5" reinforced con slab on sand or gravel fill.
WALL STRUCTURE	8" concrete block exterior and partition bearing wall.	10" concrete block with face brick on front, 10" concrete block partition bearing wall or equiv.	10-12" masonry with face brick on front and sides, 10" con block partition bearing wall or equiv.
ROOF STRUCTURE	Laminated beams or wood trusses; wood decking hot mopped.	Open web steel joists, light gauge metal decking, 4 ply built-up roofing.	Open web steel joists, medium gauge metal decking, 1" rigid insulation, 4 ply built-up roofing.
DOORS	Metal sliding or swinging doors. Wood pedestrian doors.	Wood sectional O.H. loading doors. Wood or metal pedestrian doors	Wood or metal sectional O.H. doors with heavy hardware. Metal pedestrian doors.
WINDOWS	Stationary metal sash with single glazing.	Standard industrial metal sash with single glazing.	Standard industrial metal sash with opening sections and single glazing.
ELECTRICAL	BX cable wiring, minimum incandescent fixtures.	BX cable wiring, adequate incandescent or fluorescent fixtures.	BX cable or conduit wiring, average number of fluorescent fixtures.
PLUMBING	Minimum plumbing.	Adequate washroom facilities.	Standard washroom facilities and drains.

WAREHOUSE CONSTRUCTION (LOAD BEARING)

SECTION IC PAGE 3

BASE YEAR 1969

CONSTRUCTION CLASS C

C - 7	C - 8	C - 9	C - 10
12-16" masonry or reinforced con walls below frost line; footings as req'd by Nat. Bldg. Code.	12-16" masonry or reinforced con walls below frost line; footings as req'd by Nat. Bldg. Code.	12-16" masonry or reinforced con walls below frost line; footings as req'd by Nat. Bldg. Code.	16" masonry or reinforced con walls below frost line; footings as req'd by Nat. Bldg. Code.
5" reinforced concrete slab, machine finish, sand or gravel fill.	6" reinforced concrete slab, machine finish with metallic hardener, sand or gravel fill.	6-7" reinforced con slab, machine finish with metallic surface hardener, sand or gravel fill.	7-8" reinforced con slab, machine finish with metallic surface hardener, sand or gravel fill.
10-12" masonry with complete face brick exterior; 10" concrete block partition bearing wall or equiv.	12-16" masonry with complete face brick exterior or equiv. 12" concrete block partition bearing wall or equiv.	12-16" masonry with select quality face brick, precast con panel or equiv. 12" masonry partition bearing wall or equiv.	12-16" reinforced masonry with select precast con panels or equiv. 12-16" masonry partition bearing wall or equiv.
Open web steel joists medium gauge metal decking, 1-2" rigid insulation, 4 ply built-up roofing.	Long span steel joists heavy gauge metal decking, 1½-3" rigid insulation, 5 ply built-up roofing.	Steel beams or trusses, heavy gauge metal decking, 2½" rigid insulation, 5 ply built-up roofing.	Precast concrete or heavy duty steel beams with 2½" rigid insulation, 5 ply built-up roofing.
Metal O.H. roll doors, chain operated or equivalent. Metal pedestrian doors.	Metal O.H. roll doors, electrically operated or equiv. Metal pedestrian doors.	Metal-Glass O.H. roll doors, electrically operated or equiv. Fire resistant metal pedestrian doors.	Metal-Glass O.H. roll doors, electrically operated or equiv. Fire resistant metal pedestrian doors.
Good grade industrial metal sash with opening section and single glazing.	Select grade metal sash with vented single glazed windows, chain power operated.	Select grade metal sash with adjustable single glazed windows, electrically operated.	Select grade metal sash with adjustable single glazed windows, electrically operated.
BX cable or conduit wiring, select quality fluorescent fixtures or equiv.	BX cable and conduit wiring, select quality fluorescent fixtures or equiv.	Heavy Duty BX cable and conduit wiring, select quality mercury fixtures or equiv.	Heavy Duty BX cable and conduit wiring, select quality mercury fixtures or equiv.
Good quality washroom facilities and drains.	Good quality washroom facilities and drains.	Select washroom facilities and drains.	Select washroom facilities and drains.

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS	Adequate reinforced concrete footings as req'd for structural steel, 8" masonry or concrete foundation walls.	Adequate reinforced concrete footings as req'd for structural steel, 8" masonry or concrete foundation walls.	Standard reinforced concrete footings as req'd for structural steel, 10" masonry or reinforced concrete foundation walls.
FLOOR STRUCTURE	4" concrete slab on grade.	4" reinforced concrete slab on grade.	5" reinforced concrete slab, gravel fill.
STEEL STRUCTURE	Light weight steel columns & beams with open web steel joists. Typical span 16'X20'.	Light weight steel columns & beams with open web steel joists. Typical span 20'X20'.	Average weight steel columns & beams with open web steel joists. Typical span 25'X30'.
EXTERIOR WALLS	8" concrete block or equiv. in metal siding.	8" concrete block with face brick on front of building, or heavy duty metal siding.	10" masonry with face brick on front and sides; heavy duty insulated metal siding or equiv.
ROOF STRUCTURES	Light gauge metal decking with 3 ply built-up roofing or equiv.	Light gauge metal decking with 4 ply built-up roofing or equiv.	Medium gauge metal decking with 1" rigid insulation and 4 ply built-up roofing.
DOORS	Wood sliding doors and wood pedestrian doors.	Wood sectional O.H. doors, wood or metal pedestrian doors.	Wood sectional O.H. doors with heavy hardware, chain operated or equiv. Metal pedestrian doors.
WINDOWS	Light weight stationary industrial metal sash with single glazing.	Standard stationary industrial metal sash with single glazing.	Standard industrial metal sash with manual opening section and single glazing.
ELECTRICAL	Minimum wiring and incandescent fixtures.	BX cable wiring with adequate incandescent or open fluorescent fixtures.	BX cable or conduit wiring with select quality fluorescent fixtures or equiv.
PLUMBING	Minimum plumbing requirements	Minimum washroom facilities, necessary drains.	Adequate washroom facilities and drains.

WAREHOUSE BUILDINGS (STEEL FRAMING)

SECTION IC PAGE 5

BASE YEAR 1969

CONSTRUCTION CLASS-C

C - 7	C - 8	C - 9	C - 10
Standard reinforced concrete footings as req'd for structural steel, 10-12" masonry or reinforced concrete foundation walls.	Heavy reinforced concrete footings as req'd for structural steel, 12" masonry or reinforced concrete foundation walls.	Heavy reinforced concrete footings as req'd for structural steel, 12" masonry or reinforced concrete foundation walls.	Heavy reinforced concrete footings as req'd for structural steel, 12-16" masonry or reinforced concrete foundation walls.
5" reinforced concrete slab, machine trowelled, sand or gravel fill.	6" reinforced concrete slab with surface hardener, sand or gravel fill.	6-7" reinforced concrete slab, with metallic surface hardener, sand or gravel fill.	7-8" heavily reinforced concrete slab, with metallic surface hardener, sand or gravel fill.
Average weight steel columns & beams with long span steel joists Typical span 30'X40'.	Steel columns & beams with long span steel joists. Typical span 30'X50'.	Steel columns & beams with long span steel joists. Typical span 40'X50' or 30'X60'.	Steel columns & beams with long span steel joists or steel truss Typical span 40'X60'.
10" masonry with complete face brick exterior; heavy duty insulated metal siding or equiv.	10-12" masonry with complete select face brick exterior; light precast concrete panels or equiv.	Architectural design, 12" masonry with select glazed brick; precast concrete panels or equiv.	Architectural design, heavy precast concrete panels with punched in windows or equiv.
Medium gauge metal decking with 1-2" rigid insulation and 4 ply built-up roofing.	Heavy gauge metal decking with 1½-3" rigid insulation and 5 ply built-up roofing.	Heavy gauge metal decking with 2" or more rigid insulation and 5 ply built-up roofing.	Heavy gauge metal decking with 2" or more rigid insulation and 5 ply built-up roofing.
Metal O.H. doors, chain operated or equiv., fire resistant metal pedestrian doors.	Metal roll O.H. doors, electrical operated or equiv., fire resistant metal pedestrian doors.	Metal-Glass roll O.H. doors, electrical operated or equiv., fire resistant metal pedestrian doors.	Metal-Glass roll O.H. doors, electrical operated or equiv., fire resistant metal pedestrian doors.
Good grade metal sash with opening section, chain operated, single glazing.	Select grade metal sash with vented single glazed windows, chain operated.	Select grade metal sash with adjustable single glazed windows, electrical operated.	Select grade metal sash with adj single glazed windows, electrical operated.
BX cable and conduit wiring with select quality fluorescent fixtures or equiv.	Heavy Duty BX cable and conduit wiring with select quality fluorescent or mercury fixtures or equiv.	Heavy Duty BX cable and conduit wiring with select quality mercury fixtures or equiv.	Heavy Duty BX cable and conduit wiring with select quality mercury fixtures or equiv.
Standard washroom facilities and drains.	Standard washroom facilities and drains.	Select washroom facilities and drains.	Select washroom facilities and drains.

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATIONS AND FOOTINGS	Adequate reinforced concrete footings as req'd for structural steel.	Adequate reinforced concrete footings as req'd for structural steel, 8" masonry or concrete foundation walls.	Standard reinforced concrete footings as req'd for structural steel, 10" masonry or reinforced concrete foundation walls.
FLOOR STRUCTURE	5" reinforced concrete slab on grade.	5" reinforced concrete slab on gravel fill.	6" reinforced concrete slab on sand or gravel fill, machine trowelled with hardener.
STEEL STRUCTURE	Normal strength steel columns and beams with open web steel joists. Typical span 25'X30'.	Normal strength steel columns and beams with open web steel joists. Typical span 30'X40'.	Normal strength steel columns and beams with long span steel joists. Typical span 30'X50'.
EXTERIOR WALLS	8" concrete block sidings or equiv.	8" concrete block with face brick on front of building, heavy duty metal siding or equiv.	10" masonry wall with face brick on front and sides, heavy duty metal siding or equiv.
ROOF STRUCTURE	Light gauge metal decking with 3 ply built-up roofing or equiv.	Medium gauge metal decking with 4 ply built-up roofing or equiv.	Medium gauge metal decking with 4 ply built-up roofing with 1" rigid insulation or equiv.
DOORS	Wood sliding doors and wood pedestrian doors.	Wood or metal sectional O.H. doors, wood or metal pedestrian doors.	Wood or metal sectional O.H. doors with heavy hardware, chain operated, metal pedestrian doors.
WINDOWS	Minimum industrial sash with single glazing.	Standard industrial stationary metal sash with single glazing.	Standard industrial metal sash with manually operated sections and single glazing.
ELECTRICAL	Minimum wiring and incandescent fixtures.	BX or conduit wiring with adequate incandescent or fluorescent fixtures.	Heavy Duty BX or conduit wiring with select quality fluorescent fixtures or equiv.
PLUMBING	Minimum plumbing requirements.	Minimum washroom facilities and drains.	Adequate washroom facilities and drains.

CONSTRUCTION CLASS C

C - 7	C - 8	C - 9	C - 10
Standard reinforced concrete footings as req'd for structural steel, 12" masonry or reinforced concrete foundation walls.	Standard reinforced concrete footings as req'd for structural steel, 12" masonry or reinforced concrete foundation walls.	Heavy reinforced concrete footings as req'd for structural steel, 16" reinforced concrete foundation walls.	Heavy reinforced concrete footings as req'd for structural steel, 16" reinforced concrete foundation walls.
7" reinforced concrete slab on sand or gravel fill, with metallic hardener.	8" reinforced concrete slab on sand or gravel fill, with medium service metal surface hardener.	9" reinforced concrete slab on compacted sand, heavy service metal surface hardener.	9" heavily reinforced concrete slab on compacted sand, extra heavy service metal surface hardener or emory chips.
High strength steel columns & beams with long span steel joists or trusses. Typ. span 40'X50' or 30'X60'.	High strength steel columns & beams with steel trusses. Typical span 40'X50' or 30'X60'.	Ultra strength steel columns & beams with steel trusses. Typical span 30'X60' or 40'X60'.	Ultra strength steel columns & beams with heavy steel trusses. Typical span 40'X60' or 50'X60'.
10" masonry wall with complete face brick exterior, good quality metal panels or equiv. insulated.	10" masonry wall with complete face brick exterior, or good quality insulated metal panels or equiv.	Select quality asbestos, steel insulated panels, or equiv.	Select quality coloured steel insulated panels with large glass area.
Heavy gauge metal decking with 1-2" rigid insulation and 4-5 ply built-up roofing or equiv.	Heavy gauge metal decking with 1½-3" rigid insulation and 5 ply built-up roofing or equiv.	Heavy gauge metal decking with 2" or more rigid insulation and 5 ply built-up roofing or equiv.	Heavy gauge metal decking with 2" or more rigid insulation and 5 ply built-up roofing or equiv.
Metal O.H. doors, chain operated or equiv., fire resistant metal pedestrian doors.	Roll metal doors, electrical operated or equiv., fire resistant heavy duty pedestrian doors.	Roll metal doors, electrical operated or equiv., fire resistant heavy duty pedestrian doors.	Select quality roll metal doors electrical operated or equiv., fire resistant heavy duty pedestrian doors.
Good grade metal sash with opening sections, chain operated or equiv., single glazing.	Good grade vented metal sash with wire glass or equiv., chain operated.	Good grade vented sash with either fire resistant wire glass or reducing glass.	Select quality vented sash with heat and glare reducing glass or equiv.
Heavy Duty BX or conduit wiring with select quality fluorescent or mercury fixtures or equiv.	Heavy Duty BX or conduit wiring with select quality fluorescent or mercury fixtures or equiv.	Heavy Duty BX or conduit wiring with select quality fluorescent or mercury fixtures or equiv.	Heavy Duty BX or conduit wiring with select quality fluorescent or mercury fixtures or equiv.
Standard washroom facilities and drains.	Standard washroom facilities and drains.	Standard washroom facilities and drains.	Standard washroom facilities and drains.

LIGHT INDUSTRIAL (LOAD BEARING)

COST FACTORS

10,000 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \ Class Shape	4	5	6	7	8	9	10
A	4.30	4.85	5.45	6.15	7.05	8.10	8.85
B	4.55	5.15	5.80	6.50	7.45	8.55	9.30
C	4.80	5.35	6.10	6.85	7.85	9.00	9.75
Storey Ht.	13'	14'	15'	16'	18'	20'	20'

AREA ADJUSTMENT TABLE

10,000 SQ. FT. BASE

CONST. CLASS 'C'

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000+
.88	.86	.85	.83	.79	.77	.76	.75

WAREHOUSE (LOAD BEARING)

COST FACTORS

10,000 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \ Class Shape	4	5	6	7	8	9	10
A	4.15	4.90	5.75	6.60	7.60	8.55	9.35
B	4.45	5.20	6.10	7.00	8.05	9.05	9.85
C	4.75	5.45	6.40	7.40	8.45	9.50	10.30
Storey Ht.	14'	16'	18'	20'	22'	24'	24'

HEIGHT ADJUSTMENT: 3% For each foot of wall height variationNOTE:

Cost factors do not include basements, heating, air conditioning, sprinklers or interior finishes. Second storey cost factors may be obtained by applying 80% to first storey rates.

LIGHT INDUSTRIAL (LOAD BEARING)

COST FACTORS

10,000 Sq. Ft. Base

Const. Class 'C'

Class Shape \	4	5	6	7	8	9	10
A	4.30	4.85	5.45	6.15	7.05	8.10	8.85
B	4.50	5.15	5.80	6.50	7.45	8.55	9.30
C	4.80	5.35	6.10	6.85	7.85	9.00	9.75
Storey Ht.	13'	14'	15'	16'	18'	20'	20'

AREA ADJUSTMENT TABLE

10,000 Sq. Ft. Base

Const. Class 'C'

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75
200,000	300,000	600,000	1,000,000	2,000,000	3,000,000		
.73	.72	.70	.69	.68	.67		

WAREHOUSE (LOAD BEARING)

COST FACTORS

10,000 Sq. Ft. Base

Const. Class 'C'

Class Shape \	4	5	6	7	8	9	10
A	4.15	4.90	5.75	6.60	7.60	8.55	9.35
B	4.45	5.20	6.10	7.00	8.05	9.05	9.85
C	4.75	5.45	6.40	7.40	8.45	9.50	10.30
Storey Ht.	14'	16'	18'	20'	22'	24'	24'

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE:

Cost factors do not include basements, heating, air conditioning, sprinklers or interior finishes. Second storey cost factors may be obtained by applying 80% to first storey rates.

STANDARD INDUSTRIAL (STEEL FRAME)

10,000 SQ. FT. BASE		COST FACTORS					CONST. CLASS 'C'	
Class Shape \		4	5	6	7	8	9	10
A		5.20	5.75	6.40	7.05	7.65	8.80	10.05
B		5.55	6.05	6.65	7.40	8.00	9.10	10.35
C		5.80	6.40	7.00	7.75	8.30	9.45	10.70
Storey Ht.		13'	14'	15'	16'	16'	18'	20'

WAREHOUSE (STEEL FRAME)

10,000 SQ. FT. BASE		COST FACTORS					CONST. CLASS 'C'	
Class Shape \		4	5	6	7	8	9	10
A		5.05	5.65	6.25	7.20	8.25	9.45	11.30
B		5.40	6.00	6.65	7.60	8.65	9.90	11.80
C		5.75	6.35	7.00	8.00	9.05	10.35	12.25
Storey Ht.		16'	17'	18'	20'	22'	24'	28'

HEAVY INDUSTRIAL (STEEL FRAME)

10,000 SQ. FT. BASE		COST FACTORS					CONST. CLASS 'C'	
Class Shape \		4	5	6	7	8	9	10
A		6.50	7.50	8.60	9.85	11.30	13.50	15.95
B		6.85	7.85	9.00	10.25	11.75	13.95	16.45
C		7.20	8.20	9.40	10.65	12.20	14.40	17.00
Storey Ht.		16'	18'	20'	22'	24'	28'	32'

HEIGHT ADJUSTMENT NOTES

MASONRY BUILDINGS: 3% for each foot of wall height variation.

METAL CLAD BUILDING: For each foot of variation in height up to $1\frac{1}{2}$ times the basic height shown, adjust the unit costs by 3% per foot; for each additional foot of height adjust by 1% per foot.

CLASSIFICATION:

When costing a structure with metal clad exterior reduce rate by one half class.

Class Components	D - 3	D - 4	D - 5
FOUNDATION AND FOOTINGS	Poured conc. pads & piers.	Necessary reinforced concrete foundation to support steel columns & roof structure.	Necessary reinforced concrete foundation to support steel columns & roof structure. Perimeter foundation of concrete or concrete block.
FLOOR STRUCTURE	Earth or gravel.	Earth or gravel.	4" concrete slab on gravel fill.
STRUCTURAL DATA	Pre-fabricated rigid framed. Gabled structure of tapered or untapered columns & rafters.	Pre-fabricated rigid framed, clear span, gabled structure of tapered or untapered columns & rafters.	Pre-engineered rigid framed, gabled, single or multiple spanned building of tapered or untapered columns & rafters. Maximum span 50'.
EXTERIOR WALLS	Light gauge corrugated galvanized metal sheathing.	Corrugated galvanized metal sheathing	Medium gauge corrugated galvanized metal sheathing.
ROOF CONSTRUCTION	Light gauge corrugated galvanized metal roofing.	Corrugated galvanized metal roofing.	Medium gauge corrugated galvanized metal roofing.
DOORS	Entrance openings only.	Minimum number of O.H. doors with one pedestrian door.	Adequate number of O.H. drs and fire resistant ped. doors.
WINDOWS	Nil	Nil	Minimum number of industrial steel sash or corrugated plastic windows.
ELECTRICAL	Nil	Nil	BX wiring with minimum number of incandescent fixtures.
PLUMBING	Nil	Nil	Minimum drains and washroom facilities.
GUTTERS ETC.	Nil	Nil	Adequate
VENTILATORS	Nil	Nil	Nil

PRE-ENGINEERED METAL BUILDINGS

SECTION IC PAGE II
BASE YEAR 1969
CONST. CLASS 'D'

D - 6	D - 7	D - 8
Necessary reinforced concrete foundation to support steel columns & roof structure. Perimeter foundation of concrete or concrete block.	Adequate reinforced concrete foundation to support steel columns & roof structure. Perimeter foundation of concrete or concrete block.	Heavy reinforced concrete foundation to support steel columns & roof structure. Perimeter foundation of reinforced concrete.
4" concrete slab on sand or gravel fill. 1" concrete finish with hardener.	5" concrete slab on compacted sand or gravel fill with 1" concrete finish and hardener.	5"-6" reinforced concrete slab on compacted sand fill with concrete finish and metallic hardener.
Pre-engineered rigid framed, gabled, single or multiple spanned building of tapered or untapered columns & rafters. Maximum span 60'.	Pre-engineered rigid framed, gabled, single or multiple spanned building of tapered or untapered columns & rafters. Span 70'.	Pre-engineered rigid framed, gabled, single or multiple spanned building of tapered or untapered columns & rafters. Span 70'+.
Medium gauge coloured corrugated metal siding.	Medium gauge coloured corrugated metal siding with fibre-glass insulation and polyethylene lining or equiv.	Medium gauge coloured corrugated metal siding with fibre-glass insulation and metal lining or equiv. quality veneer.
Medium gauge coloured metal roofing or equiv.	Medium gauge coloured corrugated metal roofing with fibre-glass insulation and polyethylene lining or equiv.	Medium gauge coloured corrugated metal roofing with fibre-glass insulation and metal lining or equiv. quality veneer.
Adequate number of O.H. doors and fire resistant pedestrian doors.	Good quality O.H. doors and fire resistant pedestrian doors.	Select quality O.H. doors and fire resistant pedestrian doors.
Adequate industrial steel sash or corrugated plastic windows.	Good quality industrial steel or aluminum sash, or corrugated plastic windows.	Numerous select quality metal sashed, or corrugated plastic windows.
BX wiring with minimum of fluorescent fixtures.	BX wiring with adequate fluorescent fixtures.	BX wiring with many fluorescent fixtures of select quality.
Adequate washroom facilities and drains.	Adequate washroom facilities and drains.	Standard washroom facilities and drains.
Adequate	Good quality metal.	Good quality metal.
Few.	Several.	Many.

PRE-ENGINEERED METAL BUILDINGS

COST FACTORS

CONST. CLASS 'D'

Class Area \ Class	D - 3	D - 4	D - 5	D - 6	D - 7	D - 8
1,000	2.90	3.80	5.45	7.15	8.80	10.45
2,500	2.75	3.65	5.25	6.85	8.45	10.05
5,000	2.65	3.55	5.05	6.60	8.15	9.70
7,500	2.55	3.50	5.00	6.45	7.90	9.40
10,000	2.45	3.40	4.85	6.25	7.70	9.10
15,000	2.35	3.30	4.65	6.05	7.40	8.80
20,000	2.30	3.25	4.55	5.85	7.20	8.50
50,000	2.25	3.20	4.45	5.70	6.95	8.20
100,000	2.20	3.15	4.35	5.55	6.75	7.90
200,000	2.10	3.05	4.20	5.35	6.50	7.65
Wall Height	16'	16'	16'	16'	16'	16'

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation up to 24'. For each foot over 24' adjust by 1%.

NOTE:

Cost factors do not include basements, heating, air conditioning, sprinklers, interior finishes or partition walls. Second storey cost factors may be obtained by applying 80% to first storey rates.

ADDITIVES FOR PRE-ENGINEERED BUILDINGS

ITEM	DESCRIPTION	COST PER SQ. FOOT
MASONRY	4" Brick + 4" conc. block back-up 4" Brick + 6" conc. block back-up 4" Brick + 8" conc. block back-up	\$1.35 \$1.45 \$1.50
METAL WALLS	1" Fiberglass batt with polyethylene liner. 2" Fiberglass batt with polyethylene liner. 3" Fiberglass batt with polyethylene liner.	\$0.12 \$0.14 \$0.16
WALL LINER	Interior metal wall liner (galvanized) Interior metal wall liner (coloured)	\$0.38 \$0.45

NOTE:

The above additive unit cost factors are based on actual area and allow for the differences in cost between the normal cladding as per specifications and the items listed above.

QUONSET BUILDINGS

COST FACTORS

FRAMELESS

CONST. CLASS 'D'

<u>Length</u> <u>Width</u>	30'	40'	50'	60'	80'	100'	120'	Height
30'	2.60	2.45	2.30	2.20	2.15	2.10	2.05	15'
40'		2.50	2.40	2.30	2.20	2.15	2.10	18'
50'			2.50	2.40	2.35	2.30	2.20	18'
60'				2.60	2.50	2.45	2.40	20'
70'					2.75	2.70	2.60	24'
80'						2.75	2.60	21'

COST FACTORS

ARCH RIB FRAMEWORK WITH WOOD OR STEEL

CONST. CLASS 'D'

<u>Length</u> <u>Width</u>	24'	30'	36'	42'	48'	60'	72'	84'	96'	108'
20'	4.35	4.10	4.00	3.90	3.80	3.65	3.55	3.50	3.40	3.35
32'		4.40	4.20	4.10	4.00	3.80	3.70	3.60	3.50	3.40
40'				4.40	4.30	4.10	4.00	3.90	3.80	3.75

NOTE:

The above cost factors include the costs of the basic shell structure erected on a low concrete foundation and end walls, each with a pedestrian door and two windows. Cost factors do not include the cost of interior finish, flooring, electric wiring, plumbing, heating, air conditioning or ventilation.

ADDITIVES FOR QUONSET BUILDINGS

ITEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVG.	GOOD	EXCELLENT
FLOORING	Asphalt 2" - 4"	\$.25	\$.30	\$.35	\$.40
	Concrete 4" - 6"	\$.40	\$.50	\$.60	\$.75
LIGHTING	Incandescent	\$.20	\$.25	\$.35	\$.45
	Fluorescent	\$.25	\$.35	\$.50	\$.65
INSULATION	COST PER SQ. FT. OF ROOF AREA				
	2" Blown on insul.				\$.35
	1" Board form + furring				\$.40
	2" Board form + furring				\$.45
WINDOWS	Side windows				\$ 68.00 Per Unit

TYPE I - LUMBER RACKS (UNROOFED)

Concrete or masonry foundation. 4 inch X 4 inch sleepers on grade, covered with 2 inch plank flooring. Frame construction of braced posts and beams. No roof or exterior wall covering. Lumber racks or bins, framed between structural members for vertical storage of lumber.

TYPE II - LUMBER STORAGE SHED (ALL OPEN)

Concrete or masonry foundation. 4 inch X 4 inch sleepers on grade, covered with 2 inch plank flooring. Frame construction of braced posts and beams. Low pitch gable or shed type composition roof. No exterior wall covering. Lumber racks or bins framed between structural members for vertical storage of lumber.

TYPE III - LUMBER STORAGE SHED (OPEN FRONT)

Concrete pier foundation. No flooring. Post and girder frame. Low pitched shed type composition roof. The two ends and rear wall finished as follows: painted boards, siding, siding over sheathing, or equivalent material. Interior unpainted with lumber racks or bins.

TYPE IV - LUMBER STORAGE SHED (DOUBLE DECK)

Concrete pier foundation. No floor. Post and girder frame. Low pitched gable or shed type composition roof. Exterior wall finished as follows: painted boards, siding, siding over sheathing, or equivalent material. Interior unpainted with lumber racks or bins and service walks. Adequate number of doors and windows.

Note: Compute on ground floor area only.

TYPE V - MOULDING STORAGE SHED

Concrete or masonry foundation. Concrete floor. Wood frame. Low pitched gable or shed type composition roof. Exterior side walls are open. End walls finished as follows: painted boards, siding, siding over sheathing, or equivalent material. Interior unpainted with lumber racks or bins.

TYPE VI - MATERIAL STORAGE SHED

Concrete or masonry foundation. Concrete floor on grade. Wood frame. Low pitched gable or shed type composition roof. Structure is completely enclosed, finished as follows: painted boards, siding, siding over sheathing, or equivalent material. Interior unpainted with no lumber racks or bins. Adequate number of doors & windows.

TYPE VII - PLANING OR MILLING SHED

Concrete or masonry foundation. Concrete floor on grade. Wood frame. Low pitched gable or shed type composition roof. Structure is completely enclosed with any of the following materials: painted boards, siding, siding over sheathing, or equivalent material. Interior is unpainted, no lumber racks or bins. Adequate doors & windows.

TYPE VIII - LUMBER STORAGE BUILDING (MONITOR ROOF)

Concrete or masonry foundation. Concrete floor on grade. Wood frame. Monitor type composition roof. Structure is completely enclosed with any of the following materials: painted boards, siding, siding over sheathing, or equivalent material. Interior is unpainted with storage racks or bins and service walks. Adequate number of doors and windows.

LUMBER STORAGE SHEDS

COST FACTORS

CONST. CLASS 'D'

TYPE	STRUCTURE	BASE AREA	BASE HT.	HT. ADJ.	COST PER SQ. FT.		
					FAIR	AVG.	GOOD
I	LUMBER RACKS (unroofed) Vertical Storage of Lumber	600	16'	2%	0.90	1.10	1.30
II	LUMBER STORAGE SHEDS (all open) Vertical Storage of Lumber	2000	22'	2%	1.75	2.25	2.75
III	LUMBER STORAGE SHED (open front) Horizontal Storage of Lumber and Mouldings	2000	8'	3%	1.85	2.40	2.95
IV	LUMBER STORAGE SHED (double deck) Horizontal Storage of Lumber and Mouldings	2000	14'	2%	2.85	3.30	3.75
V	MOULDING STORAGE SHED Vertical Storage of Finished Mouldings & Lumber	5000	20'	2%	2.85	3.40	4.00
VI	MATERIAL STORAGE SHED Other Building Material	3000	12'	3%	2.75	3.30	3.85
VII	PLANING OR MILLING SHED	2000	12'	3%	2.85	3.40	3.95
VIII	LUMBER STORAGE BLDG.(Moniter roof) Storage and Sales of Lumber and Moulding	6000	16'	3%	4.55	5.15	5.70

NOTE:

NO MODIFICATION FOR SHAPE - For Area Modification, use Area Adjustment Tables; see
Page 29.

COST FACTORS DO NOT INCLUDE basements, heating, air conditioning, electric
wiring or interior finish, except as described in specifications.

ADDITIVES FOR LUMBER STORAGE SHEDS

ITEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVG.	GOOD	EXCELLENT
FLOORING	Asphalt 2" - 4"	\$.25	\$.30	\$.35	\$.40
	Concrete 4" - 6"	\$.40	\$.50	\$.60	\$.75
LIGHTING	Incandescent	\$.20	\$.25	\$.35	\$.45
	Fluorescent	\$.25	\$.35	\$.50	\$.65

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LUMBER STORAGE SHEDS

COST FACTORS

CONST. CLASS 'D'

TYPE	STRUCTURE	BASE AREA	BASE HT.	HT. ADJ.	COST PER SQ. FT.		
					FAIR	AVG.	GOOD
I	LUMBER RACKS (unroofed) Vertical Storage of Lumber	600	16'	2%	0.90	1.10	1.30
II	LUMBER STORAGE SHEDS (all open) Vertical Storage of Lumber	2000	22'	2%	1.75	2.25	2.75
III	LUMBER STORAGE SHED (open front) Horizontal Storage of Lumber and Mouldings	2000	8'	3%	1.85	2.40	2.95
IV	LUMBER STORAGE SHED (double deck) Horizontal Storage of Lumber and Mouldings	2000	14'	2%	2.85	3.30	3.75
V	MOULDING STORAGE SHED Vertical Storage of Finished Mouldings & Lumber	5000	20'	2%	2.85	3.40	4.00
VI	MATERIAL STORAGE SHED Other Building Material	3000	12'	3%	2.75	3.30	3.85
VII	PLANING OR MILLING SHED	2000	12'	3%	2.85	3.40	3.95
VIII	LUMBER STORAGE BLDG.(Moniter roof) Storage and Sales of Lumber and Moulding	6000	16'	3%	4.55	5.15	5.70

NOTE:NO MODIFICATION FOR SHAPE - For Area Modification, use Area Adjustment Tables.COST FACTORS DO NOT INCLUDE basements, heating, air conditioning, electric
wiring or interior finish, except as described in specifications.ADDITIVES FOR LUMBER STORAGE SHEDS

ITEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVG.	GOOD	EXCELLENT
FLOORING	Asphalt 2" - 4" Concrete 4" - 6"	\$.25 \$.40	\$.30 \$.50	\$.35 \$.60	\$.40 \$.75
LIGHTING	Incandescent Fluorescent	\$.20 \$.25	\$.25 \$.35	\$.35 \$.50	\$.45 \$.65

CLASS COMPONENTS	C - 3	C - 4	C - 5
FOUNDATION AND STRUCTURAL WALLS	Foundation and framing similar to shell building of similar class of construction.	Foundation and framing similar to shell building of similar class of construction.	Foundation and framing similar to shell building of similar class of construction.
FLOOR FINISHES	4" concrete painted.	4" reinforced concrete with final finish, linoleum or equiv.	4" reinforced concrete with average quality vinyl-asbestos tile or equiv.
EXTERIOR WALL FINISH	Unpainted concrete block or equiv.	Common brick over block or equiv. block and stucco finish.	Average quality face brick or concrete block with stucco.
INTERIOR PARTITIONS AND FINISH	Minimum number of partitions of 2"X2" or 4" studding with low quality wallboard or plywood finish.	Few partitions of 2"X4" studding or unfinished 4" concrete block with low quality wallboard or plywood finish.	Average number of partitions of 2"X4" studing or 4-6" concrete block with average quality drywall, plaster or plywood finish. 75% of area gen.off. with minimum number of executive offices.
INTERIOR CEILING FINISH	Nailed-on ceiling of ten-test or wallboard or equiv. material.	Nailed-on ceiling of wallboard or equiv. material.	Nailed-on or suspended low quality acoustical tile or equiv.
DOORS AND WINDOWS	Minimum number of low quality single glazed windows; wood or metal stationary sash; low quality wood or metal doors.	Up to 20% of exterior wall surface fenestrated with single glazed windows; wood or metal sash; wood or metal doors.	From 20-40% fenestration with single glazed windows; good quality wood or metal sash; good quality wood or metal doors.
ELECTRICAL FIXTURES	Few incandescent fixtures.	Average number of incandescent fixtures	Adequate open end fluorescent fixtures.
WASHROOM FINISH AND PLUMBING	2 units with minimum low quality fixtures in each. Painted walls and ceilings. Painted concrete floors.	2 units with minimum low quality fixtures in each. Walls and ceilings of drywall painted. Tile flooring.	2 units with standard fixtures in each. Metal toilet partitions and painted walls and ceilings. Terrazzo floors.

AREAS ATTACHED TO INDUSTRIAL BLDGS.

CONSTRUCTION CLASS C

C - 6	C - 7	C - 8
Foundation and framing similar to shell building of similar class of construction.	Foundation and framing similar to shell building of similar class of construction.	Foundation and framing similar to shell building of similar class of construction.
4-6" reinforced concrete with heavy duty vinyl asbestos tile or equiv., broadloom in executive offices.	4-6" reinforced concrete with heavy duty vinyl asbestos, vinyl tile or equiv., broadloom in executive offices.	4-6" reinforced concrete with good quality vinyl, rubber, cork tile or equiv. Terrazzo in vestible with good quality broadloom in executive offices.
Select quality face brick, with portions of natural stone, porcelain enamel or equiv. veneer.	Select quality face brick, natural stone, porcelain enamel or equiv. veneer.	Select quality natural stone, precast concrete slab, or equiv. veneer.
Partitions of 2"X4" studing or concrete block with drywall or plaster finish or average quality painted metal, 50% of area general office, executive offices finished in average quality hardwood veneer or equiv.	Partitions of 2"X4" studing or concrete block with good quality plaster finish or good quality painted metal with glass; 25% of area general office, with executive offices finished in select quality hardwood veneer or equiv.	Partitions of insulated metal or glass with outside walls finished in good quality plaster or equiv.; 10% of area general office, with executive offices finished in select quality hardwood veneer or equiv.
Suspended fibre or mineral acoustical tile or equiv.	Suspended fibre or mineral acoustical tile with recessed electrical fixtures or plastic illuminated suspended ceilings.	Suspended fire-resistant fibre or mineral acoustical tile with recessed electrical fixtures or plastic illuminated suspended ceilings.
From 40-60% fenestration with single or double glazed windows; good quality wood or metal sash; good quality wood or metal doors or equiv.	From 50-75% fenestration with double glazed glass, clear or tinted; good quality wood sash or heavy metal framing. Good quality wood, metal or glass doors.	From 50-90% fenestration with double glazed glass, clear or tinted, select metal framing; select quality wood, metal or glass doors.
Louvered fluorescent fixtures or equiv.	Louvered or recessed fluorescent fixtures.	Many louvered or recessed fluorescent fixtures and spotlights.
2 units with average quality fixtures in each. Metal toilet partitions and ceramic tile wainscotting. Terrazzo flooring.	2 units with separate unit for executive offices. Good quality plumbing fixtures. Metal toilet partitions and ceramic tile wall covering. Terrazzo flooring.	Maximum number of fixtures as required with executive washrooms. Select quality plumbing fixtures. Metal toilet partitions and ceramic tile wall covering and flooring.

OFFICES ATTACHED TO INDUSTRIAL BUILDINGS

CLASS	COST FACTORS						CONST. CLASS 'C'
	3	4	5	6	7	8	
RATES	4.40	6.15	8.50	10.30	11.95	13.75	
STOREY HT.	8'	10'	12'	13'	14'	15'	

AREA ADJUSTMENT TABLE

(3,000 SQ. FT. BASE)

500	1000	1500	2 000	2 500	3 000	3 500
1.24	1.17	1.11	1.06	1.03	1.00	.97
4 000	5 000	6 000	7 000	8 000	9 000	10 000
.95	.92	.91	.90	.89	.88	.87

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

NOTE: Cost factors do not include basements, heating air conditioning or sprinklers. Second storey cost factors may be obtained by applying 80% to first storey rates.

OFFICES WITHIN INDUSTRIAL BUILDINGS

COST FACTORS

CLASS	3	4	5	6	7	8
RATES	2.00	2.90	4.40	6.05	7.45	9.35
STOREY HT.	7'	8'	8'	9'	10'	10'

AREA ADJUSTMENT TABLE

(3,000 SQ. FT. BASE)

500	1000	1500	2 000	2 500	3 000	3 500
1.31	1.20	1.12	1.07	1.03	1.00	.97
4 000	5 000	6 000	7 000	8 000	9 000	10 000
.94	.92	.91	.90	.89	.88	.87

HEIGHT ADJUSTMENT: 2% For each foot of wall height variation.NOTE:

Cost factors do not include basements, heating, air conditioning or sprinklers. They do include the necessary finishes and partitioning for interior office areas wherever located.

INDUSTRIAL ADDITIVES

HEATING, AIR CONDITIONING & VENTILATION

ITEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVG.	GOOD	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$0.35	\$0.50	\$0.65	\$0.80
	Forced Air (with ducts)	0.40	0.55	0.70	0.85
	Hot Water (Baseboard or Radiators)	0.50	0.70	1.00	1.30
COOLING SYS.	Refrigerated Air Conditioning	0.85	1.20	1.60	2.15
VENTILATION	Ventilation	0.25	0.30	0.35	0.45

HEIGHT ADJUSTMENT: 3% per foot of variation in height over 15'.

NOTE:

Above Square Foot Cost Factors to be applied against the total heated floor area.
(exterior measurements).

INDUSTRIAL SPRINKLERS

COST FACTORS

BUILDING AREA IN SQ. FT.	SYSTEM TYPE	TYPE OF INSTALLATION	
		OPEN	CONCEALED
2,000 to 4,000	Wet or Dry	\$0.55	\$0.60
4,000 to 6,000	Wet or Dry	0.50	0.55
6,000 to 8,000	Wet or Dry	0.45	0.50
8,000 to 10,000	Wet or Dry	0.40	0.45
10,000 to 20,000	Wet or Dry	0.35	0.40
20,000 And Up	Wet or Dry	0.30	0.35

NOTE:

Above Square Foot Cost Factors to be applied against the total sprinklered floor area.
(exterior measurements).

INDUSTRIAL ADDITIVES

BASEMENT DESCRIPTION

The following square foot cost factors are related to an unfinished reinforced concrete structure, generally used for storage, with concrete floors, minimum lighting and drainage.

This type of basement is usually found in conjunction with medium or heavy industrial manufacturing.

BASEMENT COST FACTORS

(BASIC HEIGHT 10')

Area Shape \	1,000	2,000	3,000	4,000	6,000	8,000	10,000
A	6.20	5.85	5.60	5.35	5.00	4.75	4.55
B	6.45	6.10	5.80	5.60	5.25	4.90	4.75
C	6.65	6.25	6.00	5.75	5.40	5.05	4.90



Area Shape \	12,000	14,000	16,000	20,000	24,000	30,000	40,000
A	4.45	4.35	4.20	4.10	4.05	4.00	3.90
B	4.60	4.50	4.40	4.30	4.20	4.15	4.05
C	4.75	4.60	4.50	4.40	4.30	4.25	4.15

HEIGHT ADJUSTMENT: 10% for each foot of variation in height.

NOTE:

INTERIOR CUT-UP: Add 3% to 10% to unit costs for cut-up interior walls, due to elevators, chutes, etc.

EXCLUSIONS: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

INDUSTRIAL ADDITIVES

CANOPIES

DESCRIPTION	COST PER SQ. FOOT		
	LOW COST	AVE.	GOOD
Wood Frame with Built-Up Roofing or equiv.	\$1.45	\$1.85	\$2.30
Steel Frame with Built-Up Roofing or equiv.	\$1.75	\$2.30	\$2.85
Reinforced Concrete Frame and Roof Slab.	\$3.00	\$4.50	\$7.00

LOADING DOCKS

(BASIC HEIGHT - 4')

TYPE	DESCRIPTION	COST PER SQ. FOOT
'A'	Structure of steel or reinforced concrete piers, heavy reinforced concrete slab and steel face.	\$3.50
'B'	Structure of concrete retaining wall, dirt fill, heavy reinforced concrete slab.	\$3.00
'C'	Wooden structure with timber piers and heavy plank flooring.	\$2.75
'D'	Light wooden structure with wooden piers and girders, plank flooring.	\$2.00

HEIGHT ADJUSTMENT: 10% for each foot of variation in height.

NOTE:

Industrial floors at dock level Add 50¢ per square foot to the basic structure adjusted cost factor.

DOCK LEVELLERS

DESCRIPTION	COST PER SQ. FT. OF LEVELLING PLATFORM
(a) Hinged Dock (Mechanical)	\$18.00 - \$20.00
(b) Hinged Dock (Hydraulic)	22.00 - 25.00
(c) Hinged Dock (Hydraulic with Extensions)	48.00 - 51.00
(d) Vertical Platform Lift (Hydraulic)	33.00 - 36.00
(e) Vertical Platform Lift (Hydraulic Scissor)	47.00 - 50.00

NOTE:

The above ranges in costs take into consideration the size of the platform, capacity of unit, and the extent of superfluous built-in features. Standard size is usually 6' x 8' with capacities usually ranging from 7,500 lbs. to 20,000 lbs.

INDUSTRIAL ADDITIVES

MEZZANINE FLOOR COST FACTORSTYPE 'A'

STORAGE MEZZANINE - Painted soffit; unfinished floor, or 3" reinforced concrete on open web steel joists and medium grade metal decking or equivalent wooden floor structure, supported by steel framing or mill construction; open steel or open wood-framed stairway; no interior finish on exterior walls or ceiling; welded pipe railing or equivalent between mezzanine area and industrial area; adequate fluorescent lighting for warehousing purposes.

COST per square foot of floor area: \$2.00 - \$2.25

TYPE 'B'

STORAGE MEZZANINE - Similar to Type "A" but with low cost interior finish on exterior walls and ceiling. Mezzanine area enclosed with 6" concrete block partition or equivalent.

COST per square foot of floor area: \$2.25 - \$2.75

TYPE 'C'

STORAGE MEZZANINE - Floor structure of painted open steel floor grating, 1 $\frac{1}{4}$ " x 3/16" with crossbars 4" o.c. or equivalent, supported by steel framing; open steel stairway; no interior finish on exterior walls or ceiling; mezzanine area not enclosed with partition wall.

COST per square foot of floor area: \$3.40 - \$3.90

INDUSTRIAL ADDITIVES

PARTITION COST FACTORS

T Y P E	DESCRIPTION	COST PER SQ. FT. OF WALL AREA
MASONRY WALLS	4" con. blk. wall 6" con. blk. wall (unfinished) 8" con. blk. wall (unfinished) 10" con. blk. wall (unfinished) 12" con. blk. wall (unfinished)	\$0.75 0.85 0.95 1.15 1.20
DRY WALL & PLASTER	Wallboard on Frame (finished one side) Wallboard on Frame (finished two sides) Plaster on Frame (finished one side) Plaster on Frame (finished two sides)	0.57 0.89 0.90 1.55
WIRE SCREEN	Woven Wire (stockroom enclosures 1½" diamond mesh, 10 ga. wire)	1.30

NOTE:

When conc. block partitions are 8" thick and over, they require a footing, when this is the case add \$1.50 per Lin./Ft. of wall.

RAILWAY SPUR TRACK
(STANDARD GAUGE)

RAIL WEIGHT	UNIT COST	MANUAL SWITCH	BUMPER
60 lbs.	\$16.00 per lin. ft.	\$3,900	\$445
80 lbs.	17.00 per lin. ft.	4,100	445
100 lbs.	19.00 per lin. ft.	4,250	445

NOTE:

The spur track cost factors include the average lineal foot costs of installing rails, ties and ballast.

INDUSTRIAL ADDITIVES

CHAIN LINK FENCE

DESCRIPTION	HEIGHT UNIT	4'	5'	6'
9 Ga 2" Mesh, c/w Top Rail and Line Posts 10' o.c.	LF	\$2.30 - 2.45	\$2.45 - 2.85	\$3.10 - 3.20
<u>ADDITIONS</u>				
1'0" Barbed Wire (per single strand)	LF	0.06 - 0.09	0.06 - 0.09	0.06 - 0.09
Line Posts 8' o.c.		0.16	0.18	0.19
9 Ga. 2" Mesh Alum- inum.		0.18	0.22	0.27
<u>DEDUCT FOR</u>				
No Top Rail	LF	0.40	0.40	0.40
11 Ga. Wire	LF	0.15	0.15	0.20
<u>TERMINAL POSTS</u>				
A) 2 3/8" O.D.	EA	15.30	16.35	
B) 2 7/8" O.D.	EA	18.00- 23.00	21.00- 25.00	32.00- 36.00
C) 3 1/2" O.D.	EA	21.00- 25.00	24.00- 29.00	38.00- 42.00
D) 4 1/2" O.D.	EA	28.00- 32.00	32.00- 37.00	47.00- 51.00
Swing Gates	LF	7.50	8.50	9.15

INDUSTRIAL ADDITIVES

CHAIN LINK FENCE

7'	8'	9'	10'	11'	12'
\$3.20 - 3.30	\$3.80 - 3.90	\$4.15 - 4.25	\$4.55 - 4.65	\$4.95 - 5.05	\$5.30 - 5.40
0.08 - 0.10	0.08 - 0.12	0.16 - 0.22	0.16 - 0.22	0.16 - 0.22	0.16 - 0.22
0.20	0.21	0.23	0.25	0.26	0.28
0.31	0.36	0.40	0.45	0.50	0.54
0.40	0.40	0.40	0.40	0.40	0.40
0.20	0.20	0.30	0.30	0.30	0.30
43.00- 45.00 52.00- 56.00	45.00- 48.00 56.00- 59.00	50.00- 52.00 62.00- 64.00	52.00- 54.00 65.00- 67.00	54.00- 56.00 68.00- 70.00	57.00- 60.00 72.00- 75.00
10.50	11.50	12.50	13.25	14.25	15.25

INDUSTRIAL ADDITIVES

RADIAL BRICK CHIMNEYS

HEIGHT	INSIDE DIA. AT TOP	NORMAL OUTSIDE BASE DIAMETER	COST PER VERTICAL FT.
50'	2'		\$138.00
	2'-6"		143.00
	3'		147.00
	3'-6"		152.00
75'	3'	7'-6"	150.00
	3'-6"	7'-9"	154.00
	4'	8'	161.00
	5'	9'	169.00
	6'	10'	179.00
100'	3'	9'-3"	163.00
	3'-6"	9'-6"	169.00
	4'	9'-6"	175.00
	6'	10'-3"	186.00
	8'	12'-3"	200.00
125'	4'	11'-3"	190.00
	5'	11'-9"	197.00
	6'	11'-9"	198.00
	7'	12'-6"	207.00
	8'	13'-0"	213.00
150'	6'	13'-6"	221.00
	7'	14'-0"	230.00
	8'	14'-9"	239.00
	9'	15'-0"	244.00
	10'	15'-9"	253.00
175'	8'	16'-0"	265.00
	10'	16'-3"	270.00
	12'	16'-6"	282.00

INDUSTRIAL ADDITIVES

RE-INFORCED CONCRETE CHIMNEYS

HEIGHT	INSIDE DIA. AT TOP	BASIC COST PER VERTICAL FOOT
200'	6'	\$ 400.00
	8'	460.00
	10'	515.00
	12'	575.00
	14'	630.00
250'	8'	515.00
	10'	575.00
	12'	660.00
	14'	745.00
300'	8'	575.00
	10'	690.00
	12'	805.00
	16'	1035.00
400'	14'	950.00
	16'	1065.00
500'	16'	1120.00
	20'	1150.00

INDUSTRIAL ADDITIVES

GUYED STEEL STACKS

<u>DIAMETER</u>	<u>PER VERTICAL FOOT</u>
18"	\$ 28.00 - \$38.00
24"	38.00 - 44.00
30"	43.00 - 52.00
36"	50.00 - 58.00
42"	57.00 - 65.00
48"	62.00 - 72.00
60"	76.00 - 85.00
72"	90.00 - 99.00

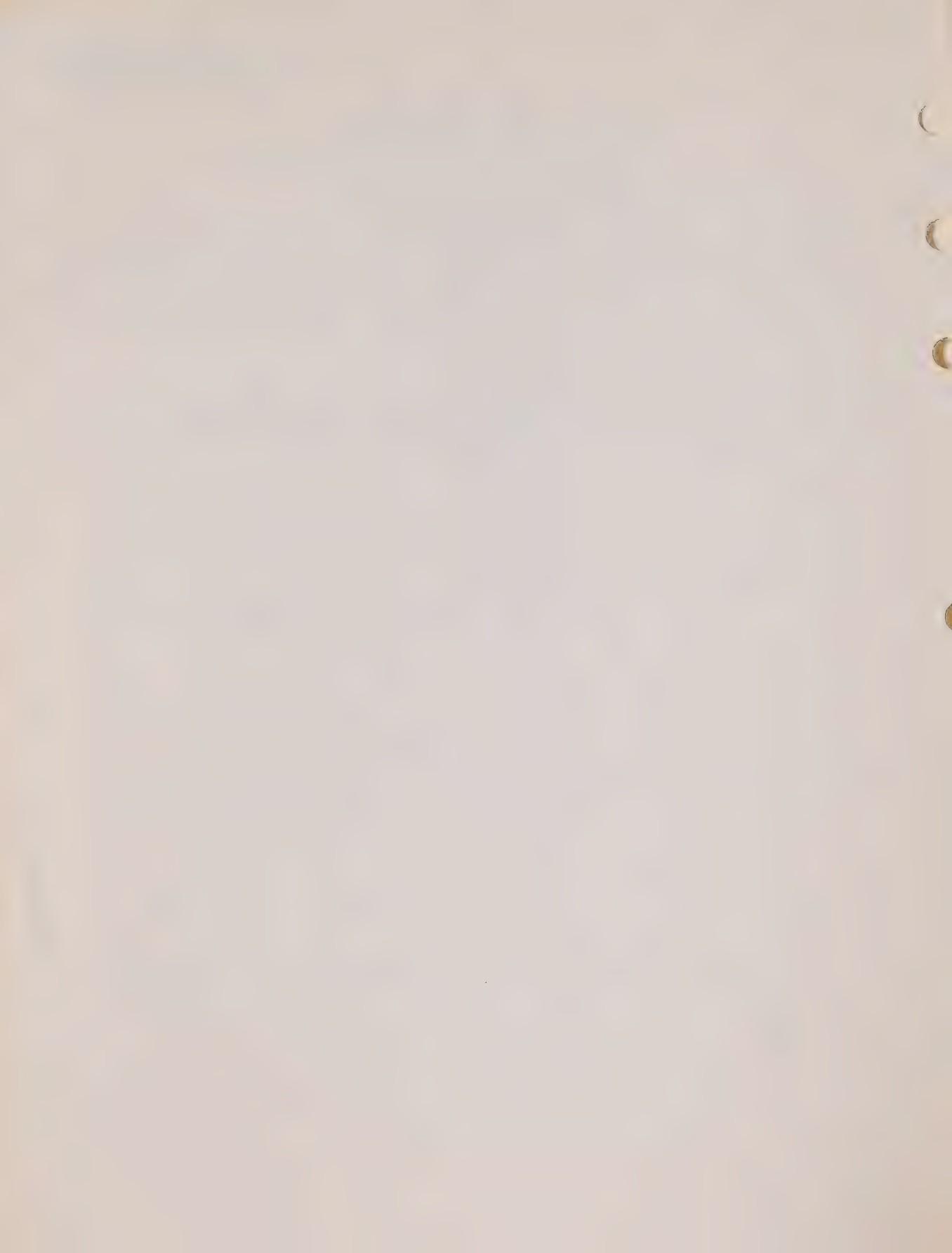
SELF-SUPPORTING STEEL STACKS

<u>DIAMETER</u>	<u>PER VERTICAL FOOT</u>
72"	\$200.00 - \$210.00
84"	210.00 - 220.00
96"	220.00 - 230.00
108"	230.00 - 240.00
120"	250.00 - 260.00
132"	260.00 - 270.00
144"	270.00 - 280.00

AREA ADJUSTMENT

(For Square Footage of Base Unit)

400		500		BASE 600	700	800	900	
1.12		1.05			.96	.93	.92	
250		300			1000	1100	1200	
1.28		1.21			.91	.90	.89	
1300	1400	1500	1600	1800	BASE 2000	2200	2400	2700
1.12	1.10	1.08	1.06	1.03		.98	.95	.93
800	900	1000	1100	1200		3000	3200	3600
1.30	1.25	1.21	1.18	1.15		.92	.91	.90
2200	2400	2600	2800	BASE 3000	3200	3400	3600	3900
1.09	1.06	1.04	1.02		.98	.97	.96	.94
1200	1400	1600	1800	2000	4200	4500	4800	5400
1.30	1.24	1.19	1.15	1.12	.93	.92	.91	.90
3500	4000	4500	BASE 5000	5400	5900	6400	6900	
1.10	1.06	1.03		.97	.95	.94	.93	
2000	2500	3000		7300	7800	8800	9800	
1.30	1.21	1.15		.92	.91	.90	.89	
4200	4800	5400	BASE 6000	6600	7200	7800	8400	
1.10	1.06	1.03		.97	.95	.94	.93	
2400	3000	3600		9000	9900	11000	12000	
1.30	1.21	1.15		.92	.91	.90	.89	



STEEL FRAMED OFFICE AREAS ATTACHED TO INDUSTRIAL BUILDINGS

GENERAL COMMENTS

The rates produced here are to cover those steel framed offices attached to Industrial Buildings. The specifications and rates contained in Section 1C pages 16 to 18 are for load bearing structures.

ISSUED 5/1976

CLASS COMPONENTS	C 4	C 5	C 6
FOUNDATIONS:	Conc. block walls below frost line. incl. wpgf. & 1" rigid insul. to perimeter Nat. Pldg. Code Std. footings.	Conc. block walls below frost line, incl. wpgf. & 1" rigid insul. to perimeter Nat. Pldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpgf & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR MASONRY	Conc. block with stucco finish or ornate conc. block.	Clay facebrick with conc. block back-up and insulation.	Precast conc. units with exposed common aggregate & some clay facebrick with conc. blk. back-up Rigid insulation.
GLAZING:	½" Tempered Plate Steel framed 40%	½" Tempered Plate Steel framed 40%	½" Tempered Plate Alum. framed 40%
STRUCTURAL FRAMING:	Open web steel joists metal decking. Typical Bays 15' x 15'	Open web steel joists. Metal decking. Typical Bays 20'x20'	Open web steel joists. Metal decking. Typical Bays 20'x25'
ROOF FINISH:	1" Rigid insul. P.U. Roofing G.I. Flashing	1" Rigid insul. B.U. Roofing G.I. Flashing	1½" Rigid insul. B.U. Roofing G.I. Flashing
INTERIOR: FLOORING:	Vinyl Asbestos tile.	Vinyl Asbestos tile.	Rubber Tile.
CEILINGS:	Perf. acoustic tile applied to gypsum board or strapping.	Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic panels with exposed tee bar suspension.
PARTITIONS & FINISH (TOILETS ONLY)	2" x 4" stud partitions low quality drywall or plywood finish or equiv.	Partitions of 2" x 4" studs or 4" concrete block, low quality drywall or plywood finish or equiv.	Partitions of 2" x 4" studs or 4" - 6" concrete block, average quality plaster or drywall painted finish or equiv.

CONST CLASS 'C'

C 7	C 8	C 9	C 10
Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Precast conc. units with exposed common aggregate. Rigid insulation.	Ledge rock with conc. block back-up. Rigid insul.	Cut limestone with conc. block back-up. Rigid insulation.	Polished Granite with brick back-up. Rigid insulation.
$\frac{1}{4}$ " Tempered Plate Alum. framed 40%	Thermobreak insulated plate. Alum. framed 40%	Thermobreak insulated plate, Alum. framed 40%	Thermobreak insulated plate, Alum. framed 40%
Open web steel joists. Metal decking. Typical Bays 20'x30'	Beams & Girders Metal decking. Typical Bays 20'x30'	Beams & Girders Metal decking. Typical Bays 30'x30'	Beams & Girders Metal decking. Typical Bays 30'x40'
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing G.I. Flashing	2" Rigid insul. B.U. Roofing Alum. Flashing	2" Rigid insul. B.U. Roofing Copper Flashing	2" Rigid insul. B.U. Roofing Copper Flashing
Rubber Tile.	Average quality carpeting.	Multi-coloured terrazzo.	Select quality carpeting.
Mineral acoustic tile applied to metal suspension.	Susp. acoustic metal pans.	Susp. metal lath & acoustical plaster.	Susp. acrylic plaster panels.
Ptns. of 2" x 4" studs or conc. block with av. quality plaster or drywall painted finish or equiv.	Ptns. of 2" x 4" studs or conc. block, good quality plaster finish or equiv.	Ptns. of 2" x 4" studs or conc. block, good quality plaster finish or equiv.	Ptns. of 2" x 4" studs or conc. block, good quality plaster finish or equiv.

SPECIFICATIONS FOR STEEL FRAMED OFFICE AREAS

CLASS COMPONENTS	C4	C5	C6
ELECTRICAL:	Avg. quality 96" 2 tube fluorescent fixtures with louvres. Surface mounted. 2 Watts/sq. ft.	Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2 Watt / sq.ft.	Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2.5 Watts/sq.ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Standard quality fixtures.

COST FACTORS

(Base Area 10,000 Sq.Ft. Base Height 14'0")

CLASS	4	5	6	7	8	9	10
RATE	8.50	10.30	12.00	15.00	16.10	18.65	21.45

NOTE: (1) No shape adjustment required

(2) No missing or common wall adjustment required

(3) Second storey attached apply 80% of above costs

(4) Partitions are additives (use Section 4C)

AREA ADJUSTMENT TABLE

500	1000	1500	2000	3000	4000	5000	6000	7000
1.89	1.45	1.29	1.20	1.12	1.04	1.07	1.05	1.03
8000	9000	10,000	11,000	12,000	16,000	20,000	25,000	30,000
1.02	1.01	1.00	.99	.98	.96	.95	.93	.92

HEIGHT ADJUSTMENT: 2% for each foot variation in height.

ATTACHED TO INDUSTRIAL BUILDINGS

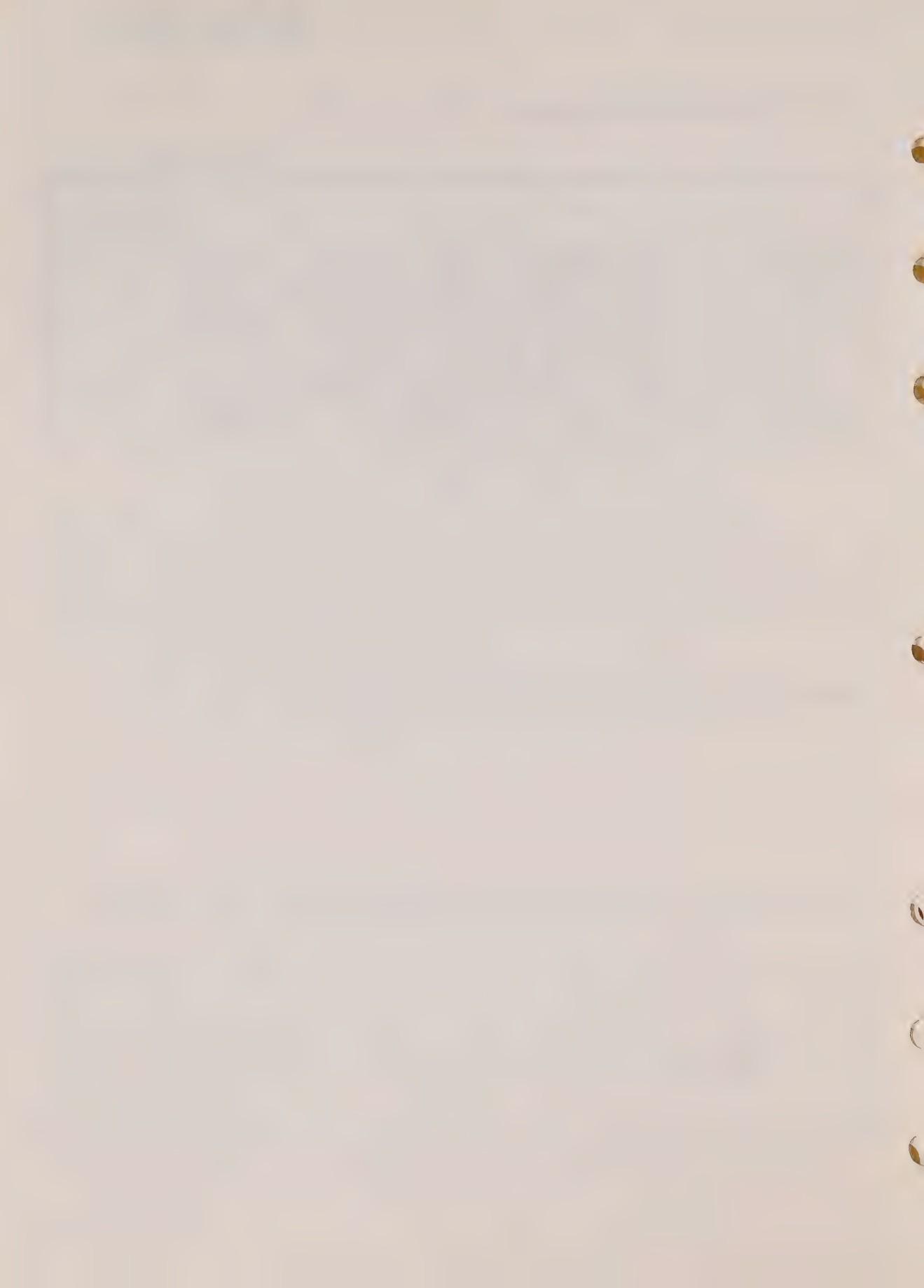
CONST. CLASS 'C'

C7	C8	C9	C10
Good quality troffer type fluorescent fixt with louvres. 1' x 4' modules. 2.5 Watts/sq.ft.	Good quality troffer type fluorescent fixt with louvres. 1' x 4' modules. 3 Watts/sq.ft.	Good quality troffer type fluorescent fixt. Acrylic Shield. 1' x 4' modules. 3.5 Watts/sq.ft.	Good quality troffer type fluorescent fixt. Acrylic Shield. 2' x 2' modules. 4 Watts/sq.ft.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.	Custom quality fixtures.

ADDITIVES. Use rates contained in Section 4C.

DEPRECIATION. Use Average Life Tables Section 10C Page 2 Offices.

ISSUED 5/1976







GENERAL COMMENTS

Within this section, service station specifications and cost factors are found taking into consideration the service station (office and service area) as a unit.

Specifications and cost factors for shell-type automotive service garages are included.

Specifications and cost factors for various classes of finished office areas within a commercial structure are supplied. It is suggested that appropriate cost factors for cut-up areas, within the shell structure, used as offices, lunchrooms, parts storage, etc., be selected from this table.

Specifications and cost factors for attached display areas are prepared for various quality classes.

The specifications and cost factors included in this section are based on information developed from a base year of 1969.

Additives to the previously mentioned basic structures such as heating, air conditioning, ventilation, kiosks and canopies should be added to the replacement cost new of the basic structure and depreciated with the structure. Suggested depreciated values are provided for such additives as pumps, underground tanks, compressors and hoists, which should not be adjusted further by either depreciation or a local modifier.

CLASS COMPONENTS	C - 5	C - 6
FOUNDATIONS AND FOOTINGS	10-12" masonry walls below frost line. Adequate conc. footings.	10-12" masonry or re.conc. walls below frost line. Adequate conc. footings.
FLOOR STRUCTURES	4-5" conc. slab with vapour barrier on compacted fill.	5" re.conc. slab with vapour barrier on gravel fill; machine trowelled surface.
WALL STRUCTURE	8-10" conc. block with paint or stucco, or equiv. Small office windows with wood or metal framing.	8-10" masonry wall of sand lime brick veneer or equiv.; porcelain enamel office trim with plate glass in metal framing.
ROOF STRUCTURE	Wood or open web steel joists; light ga. metal or T.&G. wood decking; $\frac{1}{2}$ " rigid insulation; 3-ply built-up roof; minimum overhang.	Wood or open web stl. joists; medium ga. metal or T. & G. wood decking; 1" rigid insulation; 4-ply built-up roof; slight overhang on gabble roofs.
DOORS	Wood O.H. Doors with minimum of glass. Average quality pedestrian doors.	Good quality wood or metal O.H. Doors with glass panels. Good quality pedestrian doors.
INTERIOR FINISH-(Service Area) -(Office)	Unfinished Low quality wallboard on walls and ceiling; unfinished concrete flooring.	Painted walls and gypsum ceiling or equiv. Wallboard walls, acoustic tile ceiling; vinyl asbestos tile flooring.
WASHROOM FINISH	Painted walls and ceiling; painted conc. floors	Gyproc walls with ceramic tile wainscoting; acoustic tile ceiling; vinyl asbestos tile flooring.
PLUMBING	4 low quality washroom fixtures. Adequate drainage.	4 medium quality washroom fixtures. Good Drainage.
ELECTRICAL	BX cable wiring; incandescent fixtures; adequate outlets.	BX cable or conduit wiring; fluorescent fixtures; average number of outlets.

SERVICE STATIONS

SECTION 2C PAGE 3

BASE YEAR 1969

CONST. CLASS 'C'

C - 7	C - 8	C - 9
10-12" re. conc. walls below frost line. Adequate conc. footings.	10-14" re.conc. walls below frost line. Adequate conc. footings.	10-14" re.conc. walls below frost line. Adequate conc. footings.
5-6" re.conc. slab on sand or gravel fill; machine trowelled, surface hardener; alignment pit.	5-6" re.conc. slab on sand or gravel fill; machine trowelled, coloured, surface hardener; alignment pit.	6" re.conc. slab on sand or gravel fill; machine trowelled, coloured, surface hardener; alignment pit.
8-10" masonry wall with glazed face brick veneer, porcelain enamel or equiv. large expanse of plate glass in metal framing with some stone trim, or equiv.	Architecturally designed 8-10" masonry wall with stone veneer, porcelain enamel or equiv; large expanse of plate glass in metal framing.	Architecturally designed 8-10" masonry walls with select quality stone veneer, precast concrete or equiv; large expanse of plate glass in metal framing.
Wood or o.w.s. joists; medium ga. metal or T.&G. wood decking; 1-2" rigid insulation; 4-ply built-up roof; equiv. gable roof structure with generous overhang.	Bar truss steel joists or laminated wood; heavy ga. metal or wood decking; 1-2" rigid insulation; 4-5 ply built-up roof; equiv. gable roof structure with excessive overhang.	Bar truss steel joists or equiv; 2-3" rigid insulation; 4-5 ply built-up roof; equiv. gable roof structure with excessive overhang.
Good quality metal-glass or select quality wood-glass O.H. Doors. Good quality pedestrian doors.	Select quality metal-glass O.H. Doors, or equiv Select quality pedestrian doors.	Select quality electrically operated metal-glass O.H. Doors. Select quality pedestrian doors.
Painted walls and plywood ceiling or equivalent.	Rough plaster walls with plywood ceiling or equiv.	Rough plaster walls with plywood ceiling or equiv.
Peg-board walls or equiv; acoustic tile ceiling; vinyl tile flooring or equiv.	Peg-board walls or equiv. acoustic tile ceiling; terrazzo flooring or equiv.	Plaster walls and ceiling; quarry tile flooring or equiv.
Ceramic tile wall covering; acoustic tile ceiling; terrazzo flooring or equiv.	Ceramic tile wall covering; acoustic tile ceiling; terrazzo flooring or equiv.	Select quality ceramic tile wall covering; acoustic mineral tile ceiling; quarry tile flooring or equiv.
5 good quality washroom fixtures with vanity. Good drainage.	5-7 good quality washroom fixtures with vanity. Good drainage.	5-7 select quality washroom fixtures with vanity. Good drainage.
BX or conduit wiring; fluorescent fixtures with exterior perimeter lighting; many outlets.	BX or conduit wiring; fluorescent fixtures with exterior perimeter lighting.; many outlets.	Heavy duty conduit wiring; fluorescent fixtures with exterior perimeter lighting; many outlets.

SPECIFICATIONS FOR AUTOMOBILE

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS:	Adequate re.conc. footings as required for structural steel and 8" masonry or conc. foundation walls.	Adequate re.conc. footings as required for structural steel and 8" masonry or conc. foundation walls.	Std re.conc. footings as required for structural steel and 10" masonry or re.conc. foundation walls.
FLOOR STRUCTURE	4" conc. slab on grade.	4" reinforced conc. slab with machine trowelled surface.	5" reinforced conc. slab on gravel fill, with machine trowelled surface.
STRUCTURAL FRAMING:	Light weight steel columns & beams with open web steel joists or equiv. Typical span 20' x 20'.	Light weight steel columns & beams with O.W.S.J. or equiv. Typical span 25' x 30'.	Steel columns & beams with medium span O.W.S.J. or equiv. Typical span 30' x 40'.
EXTERIOR WALLS:	8" conc. block or equiv.	8" masonry wall with conc. brick facing or heavy duty insulated metal siding.	10" masonry with sand-lime face brick veneer or equivalent.
ROOF STRUCTURE:	Light gauge metal decking with 3-ply built-up roofing or equiv.	Medium gauge metal decking with 4-ply built-up roofing or equiv.	Medium gauge metal decking with 1" rigid insulation and 4-ply built-up roofing or equiv.
DOORS:	Minimum number of low quality wood O.H. and pedestrian doors.	Average quality wood O.H. and pedestrian doors with minimum of glass panels.	Good quality wood-glass O.H. and pedestrian doors.
ELECTRICAL:	Few incandescent fixtures and minimum number of outlets.	Necessary number of incandescent fixtures and outlets.	Adequate number of open end fluorescent fixtures.
PLUMBING:	Minimum plumbing facilities.	Few drains, low quality washroom facilities.	Adequate drains and washroom facilities.

SERVICE GARAGES

C - 7	C - 8	C - 9	C - 10
Std re.conc.footings as required for structural steel and 10-12" masonry or re.conc. foundation walls.	Heavy re.conc.footings as required for structural steel and 12" masonry or re.conc. walls.	Heavy re.conc.footings as required for structural steel and 12" masonry or re.conc. foundation walls.	Heavy re.conc.footings as required for structural steel and 12 - 16" masonry or re.conc.foundation walls.
5" re. conc. slab on gravel fill, machine trowelled with surface hardener.	6" re. conc. on sand or gravel fill, machine trowelled, metallic hardener, alignment pit or equiv.	6" re. conc. on sand or gravel fill, machine trowelled, metallic hardener, alignment pit or equiv.	6" re. conc. on sand or gravel fill, machine trowelled, metallic hardener, alignment pit or equiv.
Steel columns & beams with long span steel joists or equiv. Typical span 30' x 50'.	Steel columns & beams with long span steel joists or equiv. Typical span 30' x 60'.	Heavy weight steel columns & beams with long span steel joists or equiv. Typical span 30' x 70'.	Heavy weight steel columns & beams with long span steel joists or equiv. Typical span 30' x 70'.
10" masonry with good quality face brick veneer or equiv.	Architecturally designed, 10-12" masonry with select face brick veneer or equiv.	Architecturally designed, 12" masonry with select face brick veneer or equiv.	Architecturally designed, select quality precast conc. panels or equiv.
Medium gauge metal decking with 1-2" rigid insulation and 4-ply built-up roofing.	Medium gauge metal decking with 1½-3" rigid insulation and 4-ply built-up roofing.	Heavy gauge metal decking with 2"+ rigid insulation and 4-ply built-up roofing; precast conc. roof structure or equiv.	Heavy gauge metal decking with 2"+ rigid insulation and 5-ply built-up roofing; precast conc. roof structure or equiv.
Average number of good quality metal & glass O.H. and pedestrian train doors.	Good quality metal & glass O.H. and pedestrian doors.	Many good quality metal & glass electrically operated O.H. and pedestrian doors.	Many good quality metal & glass electrically operated O.H. and pedestrian doors.
Louvered fluorescent fixtures or equiv.	Many fluorescent fixtures or equiv. or equiv.	Many fluorescent fixtures or equiv. in mercury lighting.	Many fluorescent fixtures or equiv. in mercury lighting.
Good drainage and adequate washroom facilities. Auto fume exhaust system.	Good drainage and good quality washroom facilities. Auto fume exhaust system.	Excellent drainage and good quality washroom facilities. Auto fume exhaust system.	Excellent drainage and good quality washroom facilities. Auto fume exhaust system.

SPECIFICATIONS FOR DISPLAY AREAS

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS	Similar to shell building of similar class of construction.	Similar to shell building of similar class of construction.	Similar to shell building of similar class of construction.
FLOOR STRUCTURE AND FINISH	4" conc. floor; painted.	4" re.conc. floor with low quality vinyl asbestos tile.	4" re.conc. floor with vinyl asbestos tile or equivalent.
EXTERIOR WALL FINISH & WINDOWS	Conc. block with paint or stucco exterior. 40%-50% fenestration with low quality plate glass in wood or metal frames.	Masonry walls with common brick veneer. 50%-60% fenestration with standard plate glass in wood or metal sash.	Masonry walls with face brick exterior & 60%-70% fenestration; double glazed glass with good quality metal sash.
ROOF CONSTRUCTION	Short span wood joists; 2" wood decking; 3-ply built up roofing; low cost ceiling cover.	Open web steel joists; light gauge metal decking; 4-ply built up roofing; average quality nailed on acoustic ceiling or equiv.	Open web steel joist; medium gauge metal decking; insulation; 4-ply built up roofing; average quality suspended acoustic tile ceiling or equiv.
DOORS	Low quality wood pedestrian door & wood O.H. door with small glass panels.	Average quality pedestrian door and wood-glass O.H. door.	Swing type plate glass doors in metal frame.
ELECTRICAL	BX cable wiring with low quality incandescent fixtures or equivalent.	BX cable wiring with adequate low quality fluorescent fixtures or equivalent.	BX cable or conduit wiring with average quality fluorescent fixtures or equivalent.
PLUMBING	Minimum plumbing facilities & drains.	Adequate plumbing facilities and drains	Adequate plumbing facilities and drains.

ATTACHED TO COMMERCIAL BUILDINGS

CONST. CLASS 'C'

C - 7	C - 8	C - 9	C - 10
Similar to shell building of similar class of construction.	Similar to shell building of similar class of construction.	Similar to shell building of similar class of construction.	Similar to shell building of similar class of construction.
4-5" re.conc. floor with terrazzo or broadloom flooring.	5" re.conc. floor with good quality broadloom or equiv.	5" re.conc. floor with quarry tile or equiv.	5-6" re.conc. floor with quarry tile or equiv.
Masonry with clay face brick and 60%-70% fenestration; double glazed glass, clear or tinted, in heavy metal framing.	Select clay face brick with 60%-90% fenestration; double glazed glass, clear or tinted, in select quality metal framing.	Precast conc. panels with 80%-100% fenestration; double glazed tinted glass in coloured metal framing.	Precast conc. panels with exposed aggregate and 80%-100% fenestration; double glazed tinted glass in coloured metal framing.
Long span steel joists; metal decking; insulation; 4-ply built up roofing; good quality suspended acoustic tile ceiling or equiv.	Long span steel joists; metal decking; insulation; 4-ply built up roofing; good quality suspended acoustic tile or illuminated ceiling.	Long span steel joists; metal decking; insulation; 4-ply built up roofing select quality suspended mineral tile or illuminated ceiling.	Precast conc. roof structure; insulation; 5-ply built up roofing; select quality suspended mineral, or aluminum tile ceiling.
Swing type plate glass doors in metal frame.	Sliding plate glass panels set in metal frame.	Sliding plate glass doors in select quality metal framing.	Sliding plate glass doors with select quality metal framing.
BX cable or conduit wiring with good quality fluorescent fixtures.	Heavy duty BX or conduit wiring with good quality recessed fluorescent fixtures and spotlights.	Heavy duty BX or conduit wiring with illuminated ceiling using fluorescent fixtures; numerous spotlights.	Heavy duty BX or conduit wiring with many special lighting features. Select quality fixtures.
Good quality plumbing facilities and drains	Good quality plumbing facilities and drains.	Select quality plumbing facilities and drains.	Select quality plumbing facilities and drains.

SERVICE STATIONS

COST FACTORS

(BASE HT. - 14')

CONST. CLASS 'C'

CLASS	4	5	6	7	8	9
COST PER SQ. FT.	11.10	13.30	16.00	18.90	21.90	25.05

AREA ADJUSTMENT TABLES

(1800 SQ. FT. BASE)

300	400	500	600	700	800	1000	1200	1400
1.52	1.45	1.38	1.32	1.28	1.24	1.17	1.11	1.06
1400	1600	1800	2000	2200	2500	2900	3200	3600
1.06	1.03	1.00	0.97	0.95	0.93	0.91	0.90	0.89

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

AUTOMOTIVE SERVICE GARAGE - COST FACTORS

CONST. CLASS 'C'

CLASS SHAPE	4	5	6	7	8	9	10
A	5.25	6.10	7.00	7.80	9.05	10.30	11.45
B	5.60	6.45	7.40	8.15	9.40	10.75	11.80
C	5.95	6.80	7.75	8.55	9.80	11.15	12.30
STOREY HT.	13'	14'	15'	16'	18'	20'	20'

AREA ADJUSTMENT TABLES

(10,000 SQ. FT. BASE)

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75

NOTE: Cost factors do not include basements, heating, air conditioning, sprinklers, or equipment.

Second storey cost factors may be obtained by applying 80% of first storey rates.

COST FACTORS

DISPLAY AREAS ATTACHED TO AUTOMOTIVE SERVICE BLDGS.

Display areas are usually found attached to the front of a service building, utilizing a common structural wall. The remaining three exterior walls are commonly constructed of superior materials to that of the shell structure.

CLASS	4	5	6	7	8	9	10
COST PER S.F.	6.25	8.90	11.20	13.20	16.05	18.90	20.85
STOREY HT.	12'	14'	16'	18'	20'	20'	20'

AREA ADJUSTMENT TABLE

(3,000 SQ. FT. BASE)

500	1 000	1 500	2 000	2 500	3 000	3 500	4 000	5 000
1.27	1.18	1.11	1.06	1.03	1.00	.97	.95	.93

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.

OFFICES WITHIN COMMERCIAL BUILDINGS

COST FACTORS

CLASS	3	4	5	6	7	8
RATES	2.00	2.90	4.40	6.05	7.45	9.35
CEILING HT.	7'	8'	8'	9'	10'	10'

AREA ADJUSTMENT TABLE

(3,000 SQ. FT. BASE)

500	1 000	1 500	2 000	2 500	3 000	3 500
1.31	1.20	1.12	1.07	1.03	1.00	.97
4 000	5 000	6 000	7 000	8 000	9 000	10 000
.94	.92	.91	.90	.89	.88	.87

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

NOTE: The above cost factors do not include basements, heating, air conditioning or sprinklers. They do include the necessary finishes and partitioning for interior office areas as described in Section 1C Pages 16 and 17.

SERVICE STATION ADDITIVES

HEATING, AIR CONDITIONING AND VENTILATION
(BASED ON 15' HEIGHT)

<u>Description</u>	<u>Low Cost</u>	<u>Average</u>	<u>Good</u>	<u>Excellent</u>
Automatic Suspended Units (Gas or Hot Water.)	\$ 0.40	\$ 0.55	\$ 0.70	\$ 0.90
Forced Air (with ducts)	0.60	0.75	1.00	1.30
Hot Water (Baseboard or Radiators)	0.65	0.85	1.15	1.50
Refrigerated Air Conditioning	0.80	1.10	1.50	2.00
Evaporated Cooler	0.45	0.55	0.70	0.90
Ventilation	0.20	0.30	0.35	0.45

HEIGHT ADJUSTMENT: 3% per foot of variation in height over 15 feet.NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).SPRINKLERS
(W E T O R D R Y S Y S T E M S)

<u>Area</u>	<u>Open</u>	<u>Concealed</u>
2,000 - 4,000 Sq. Ft.	\$ 0.55	\$ 0.60
4,000 - 6,000 Sq. Ft.	0.50	0.55
6,000 - 8,000 Sq. Ft.	0.45	0.50
8,000 - 10,000 Sq. Ft.	0.40	0.45
10,000 - 20,000 Sq. Ft.	0.35	0.40
20,000 - And Up	0.30	0.35

SERVICE STATION ADDITIVES

KIOSKS OR MINI-BUILDINGS (BASE AREA 80 SQ.FT. HEIGHT 7'-6")

TYPE	DESCRIPTION	COST PER SQ. FOOT
I	6" conc. slab foundation. 8" conc. block exterior walls painted. Some glazing. Minimum of interior finish. Steel roof deck or equiv.	\$ 17.00
II	6" conc. slab foundation. 4" brick and 4" conc. back-up some glazing. Minimum of interior finish. Steel roof deck or equiv.	\$ 22.20
III	6" conc. slab foundation. 4" brick and 4" conc. block back-up, 40% glazing. Full interior finish. Steel roof deck or equiv.	\$ 34.25
IV	6" conc. slab foundation. Complete fenestration to exterior walls, comprising of aluminium frame, 60% glazing and 40% insulated metal panels. Steel roof deck or equiv.	\$ 49.00

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation for Types I, II, III.
4% for each foot of wall height variation for Type IV.

AREA ADJUSTMENT TABLE (BASE AREA 80 SQ.FT.)

10	20	30	40	50	60	70	80	90	100	110
2.54	1.86	1.55	1.36	1.23	1.14	1.06	1.00	.95	.91	.87
120	130	140	150	160	170	180	190	220	250	280
.83	.80	.78	.76	.74	.72	.70	.68	.64	.60	.56

NOTE: The above cost factors include average heating and lighting.
Plumbing and partitions are additives to the above cost factors.

ADDITIVES

KIOSK - CANOPIES

DESCRIPTION	COST PER SQ. FT. OF CANOPY
Metal cantilevered construction	\$15.00

SELF SERVICE GAS STATION - CANOPIES

DESCRIPTION	COST PER SQ. FT. OF CANOPY
Free Standing Steel Framed Canopy All Sizes and Qualities	\$ 7.42

SERVICE STATION CANOPIES

TYPE OF CONSTRUCTION	SQUARE FT. RATE
Medium Wooden Frame with Built-up or Composition Roofing.	\$ 2.30 - \$ 3.00
Medium Steel Frame with Built-up or Composition Roofing.	3.00 - 4.00
Medium Steel Frame with Steel Roof Structure.	3.50 - 4.50
Reinforced Concrete Frame with Reinforced Concrete Roof Slab.	4.50 - 6.00
Reinforced Concrete Frame with Contemporary Designed Roof Slab.	6.00 - 8.00

NOTE: Range of Cost Factors allows for size as well as quality.

SERVICE STATION ADDITIVES

The following additive rates reflect an allowance for normal physical depreciation and functional obsolescence based on a relatively short economic life. These values should be added to the final depreciated building value without adjustment.

GASOLINE PUMPS

<u>TYPE</u>	<u>DEPRECIATED VALUE</u>
Blind Pump or Hand Operated	\$ 100
Visible Circular	100
Commercial Pump	200
Computing Meter - Old Type	250
One Product - One Outlet - Computer	435
One Product - Two Outlets - Computer	800
Two Products - Two Outlets - Computer	860
Remote Dispenser - One Product - One Outlet	390
Remote Dispenser - Two Products - Two Outlets	745
Submerged Pump - 1/3 H.P. Motor	250
Submerged Pump - 3/4 H.P. Motor	300
Blend Pump	875
Marina Blend Pump	875

SERVICE STATION ADDITIVES

UNDERGROUND TANKS

CAPACITY		DEPRECIATED VALUE
100	gallons	\$ 50
200	gallons	50
500	gallons	90
1,000	gallons	225
2,000	gallons	300
3,000	gallons	385
4,000	gallons	510
5,000	gallons	630
6,000	gallons	700
7,000	gallons	770
8,000	gallons	840
10,000	gallons	980

NOTE: All pollution control devices and protective epoxy coating are not assessable.

COMPRESSORS

CAPACITY		DEPRECIATED VALUE
2 H.P.	.....	\$ 370
3 H.P.	.....	450
5 H.P.	.....	470
7½ H.P.	.....	900
10 H.P.	.....	1050
15 H.P.	.....	1300
25 H.P.	.....	1600

ISSUED 11/1971

NOTE: Compressors used solely to operate air stands are not to be assessed.

Revised 4/1976.

SERVICE STATION ADDITIVES

SINGLE POST LIFTS - AIR-OIL OPERATIONSEMI-HYDRAULIC : (AIRHYDRAULIC)DEPRECIATED VALUE

FRAME CONTACT LIFT: Capacity 4,800 lbs.
 Swivel Arm Type Frame Lift with Remote Control,
 Muffler and Non-Rotator. \$ 770

FRAME CONTACT LIFT: Capacity 8,000 lbs.
 Swivel arm type frame lift with remote
 control, muffler and non-rotator. 820

"H" FRAME LIFT: Capacity 8,000 lbs.
 Rigid "H" frame lift with remote control,
 muffler and non-rotator. 790

AXLE CONTACT LIFT: Capacity 8,000 lbs.
 Free wheel lift with "H" beam axle lift,
 remote control, muffler and non-rotator. 710

DRIVE-ON LIFT: Capacity 8,000 lbs.
 Wheel contact "Drive-on Lift" with remote
 control, muffler and non-rotator. 1,010

NOTE: If lift is not equipped with a non-rotator deduct \$25.00.

FULLY HYDRAULIC

FRAME CONTACT LIFT: Capacity 4,800 lbs.
 Swivel arm type frame lift with non-rotator. 810

FRAME CONTACT LIFT: Capacity 8,000 lbs.
 Swivel arm type frame lift with non-rotator. 900

"H" FRAME LIFT: Capacity 8,000 lbs.
 Rigid "H" frame lift with non-rotator 900

AXLE CONTACT LIFT: Capacity 8,000 lbs.
 Free wheel lift with "H" beam axle lift
 with non-rotator. 840

DRIVE-ON LIFT: Capacity 8,000 lbs.
 Wheel contact drive-on lift with non-rotator. 1,130

NOTE: If lift is not equipped with a non-rotator deduct \$25.00

SERVICE STATION ADDITIVES

TWO POST LIFT

	<u>DEPRECIATED VALUE</u>
<u>FRAME CONTACT LIFT:</u>	
Capacity 8,000 lbs. With Swivel arms, rigid equalizer; side by side fixed posts. Air-oil operation or fully hydraulic.	\$1,450
Identical to above lift, with drive through or over frame.	1,510

AXLE CONTACT LIFTS:

Fore and aft fixed posts -	
Air Draulic Capacity 10,000 lbs.	1,480
Full Hydraulic Capacity 28,000 lbs.	2,660

AXLE CONTACT LIFTS:

Wheelbase range 100" - 160" with moveable front post-	
Air Oil Operation: Capacity 8,000 lbs.	1,350
Air Oil Operation: Capacity 10,000 lbs.	1,475
Air Oil Operation: Capacity 16,000 lbs.	1,680
Air Oil Operation: Capacity 24,000 lbs.	2,175
Oil-Electric Model: Capacity 12,000 lbs.	1,975
Oil-Electric Model: Capacity 16,000 lbs.	2,010
Oil-Electric Model: Capacity 24,000 lbs.	2,300
Oil-Electric Model: Capacity 28,000 lbs.	2,370
Oil-Electric Model: Capacity 36,000 lbs.	2,800

NOTE: Two Post lifts include Power Units where applicable.

MULTIPLE POST LIFTS

	<u>DEPRECIATED VALUE</u>
<u>AXLE CONTACT LIFTS:</u>	
3 Post Wheelbase range 102" - 204" Double side by side fixed rear posts with moveable front post Oil-Electric Operation: Capacity 54,000 lbs.	\$4,010

AXLE CONTACT LIFTS:

3 Post Wheelbase range 102" - 204" Fixed single centre post with moveable front and rear posts Oil-Electric Operation: Capacity 54,000 lbs.	4,170
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NOTE: Multiple Post Lifts include Power-Units where applicable.

SERVICE STATION ADDITIVES

MULTIPLE POST LIFTS

<u>AXLE CONTACT LIFTS:</u>	<u>DEPRECIATED VALUE</u>
4 Posts	
Wheelbase range 102" - 204"	
Double side by side fixed rear posts with double side by side moveable front posts.	
Oil-Electric Operation: Capacity 72,000 lbs.	\$5,100

ADDITIVES

KEY SYSTEM

Key System - This system allows operators to use their own key against which the total gallonage for their key will be shown.

CONSOLES

All consoles in self service stations are not to be assessed.

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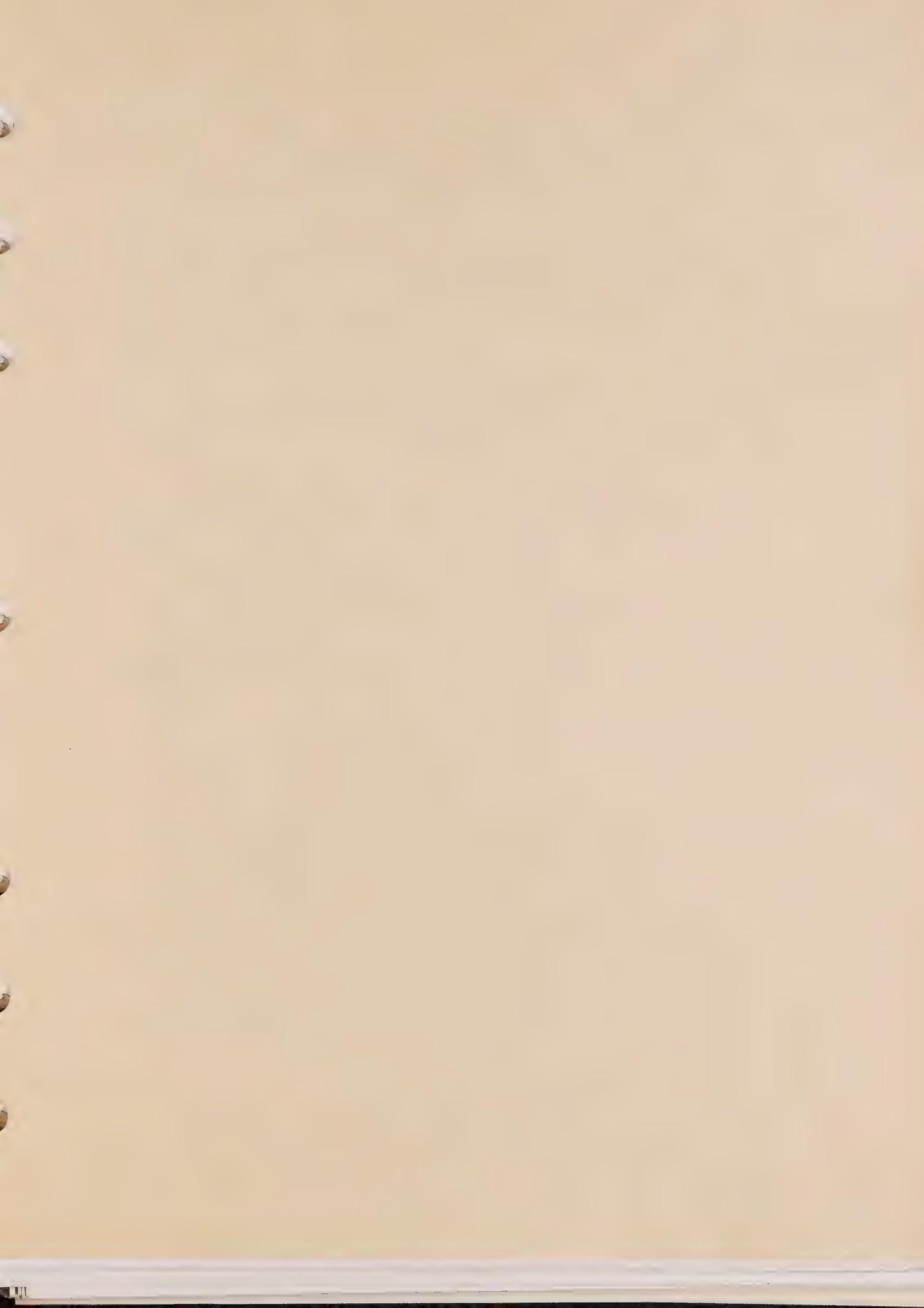
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GENERAL COMMENTS

The following are the specifications and cost factors developed from a base year of 1969 for the various commercial structures described as having a finished shell:

Retail Stores
Discount Stores
Shopping Centres
Supermarkets
Mezzanines.

The specifications for these buildings stress what is visible to the eye rather than a detailed description of the 'bone structure'.

The commercial cost factors for the above types of structures other than discount stores take into consideration three finished walls and a structural front wall only. The store front is to be treated as an additive.

The cost factors for discount stores include the cost of a normal store front.

Partitions required to divide the retail area from the necessary storage and service areas are included in the cost factors.

Additives to the previously mentioned basic structures such as heating, air conditioning, ventilation, cold storage units, mezzanines, excessive partitions, etc. should usually be added to the replacement cost new of the basic structure and depreciated with the structure.

FINISH SPECIFICATION FOR

CLASS COMPONENTS	C - 4	C - 5	C - 6
FLOORS	Painted concrete or low quality soft-wood with linoleum or equiv.	Vinyl asbestos tile on concrete or wood floor structure or equiv.	Good quality vinyl asbestos tile, inlaid linoleum, hardwood or equiv.; terrazzo at entrance.
EXTERIOR WALLS	Concrete block, painted, clay tile or equiv.	Concrete block with stucco or low cost face brick; concrete block on rear wall.	Good quality face brick or equiv.; face brick on rear wall.
INTERIOR FINISHES Walls	Low quality drywall taped and painted or equiv.	Average quality drywall or plaster, painted.	Drywall taped and textured, plaster, pegboard or equiv.
Ceilings	Open, painted.	Average quality acoustic tile or equiv.	Good quality acoustic tile or equiv.
PLUMBING	Economy grade fixtures.	Standard grade comm fixtures; wooden or low cost metal toilet partitions.	Standard grade comm fixtures; metal toilet partitions.
ELECTRICAL	BX wiring; low cost incandescent fixtures.	BX or conduit wiring; average quality open strip fluorescent fixtures.	BX or conduit wiring; good quality open strip fluorescent fixtures.

COMMERCIAL RETAIL BUILDINGS

CONSTRUCTION CLASS - C

C - 7	C - 8	C - 9	C - 10
Vinyl tile, hardwood parquet, carpeting or equiv.; terrazzo or ceramic tile at entrance.	Terrazzo, carpeting or equiv.; quarry tile or equiv. at entrance	Select quality terrazzo, travertine, carpeting or equiv. travertine or equiv. at entrance.	Select quality terrazzo, marble, carpeting or equiv.; marble or equiv. at entrance.
Select face brick, glazed brick, cut stone or equiv.; face brick on rear wall.	Architecturally designed precast concrete panels, select face brick or equiv.	Architecturally designed precast concrete panels, field stone, granite or equiv.	Architecturally designed precast concrete panels, granite, marble or equiv.
Drywall or plaster with select quality canvas backed or vinyl wall covering.	Drywall or plaster with hardwood paneling, select quality vinyl wall covering or equiv.	Select quality plaster, hardwood paneling or equiv.; ornate valances and built-in shelving.	Select quality plaster, hardwood paneling or equiv.; ornate valances and built-in shelving.
Good quality acoustic tile with illuminated ceiling panels, ornate plaster or equiv.	Good quality acoustic tile, illuminated ceiling, ornate plaster or equiv.	Select quality illuminated ceiling, ornate acoustic plaster or equiv.	Select quality illuminated ceiling, ornate acoustic plaster or equiv.
Good quality comm fixtures; good quality metal toilet partitions.	Select quality comm fixtures; select quality metal or marble toilet partitions.	Select quality comm fixtures; marble toilet partitions.	Select quality comm fixtures; marble toilet partitions.
Conduit wiring; recessed fluorescent fixtures or equiv. with spotlights.	Conduit wiring; recessed fluorescent fixtures or good quality incandescent chandelier type fixtures with spotlights.	Conduit wiring; recessed fluorescent fixtures or select quality incandescent chandeliers with many spotlights.	Conduit wiring; varied select quality recessed fluorescent, chandelier type incandescent fixtures and spotlights.

I STOREY RETAIL STORES
(SMALL TYPE)

COST FACTORS

1,500 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \	C-3	C-4	C-5	C-6	C-7	C-8	C-9
A	7.20	8.00	8.95	10.10	10.95	12.25	13.35
B	7.60	8.45	9.45	10.55	11.45	12.80	13.90
C	8.10	8.90	9.90	11.05	11.90	13.35	14.50
Storey Ht.	9'	10'	11'	12'	12'	13'	13'

AREA ADJUSTMENT TABLE

1,500 SQ. FT. BASE

600	700	800	900	1000	1200	1400	1500
1.21	1.16	1.12	1.09	1.07	1.04	1.01	1.00

1500	1600	1700	2000	2200	2500	3000	3500
1.00	.99	.98	.96	.95	.94	.93	.92

COST FACTORS

1,500 SQ. FT. BASE

CONST. CLASS 'D'

Class Shape \	D-3	D-4	D-5	D-6	D-7	D-8	D-9
A	6.05	6.70	7.55	8.50	9.25	10.40	11.25
B	6.45	7.15	8.00	8.95	9.75	10.90	11.80
C	6.85	7.55	8.50	9.45	10.20	11.45	12.40
Storey Ht.	9'	10'	11'	12'	12'	13'	13'

HEIGHT ADJUSTMENT: $2\frac{1}{2}\%$ for each foot of wall height variation.

NOTE: Above cost factors applicable to one storey buildings only.

Store fronts, basements, heating and cooling are NOT included in the rate.

RETAIL STORES
(STANDARD TYPE)
COST FACTORS
3,000 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \	C - 3	C - 4	C - 5	C - 6	C - 7	C - 8	C - 9	C - 10
A	7.45	8.35	9.05	10.00	11.55	13.40	15.10	16.60
B	7.85	8.75	9.55	10.45	12.10	14.05	15.85	17.40
C	8.25	9.20	10.05	10.90	12.70	14.70	16.65	18.25
Storey Ht.	12'	12'	12'	12'	14'	16'	18'	18'

AREA ADJUSTMENT TABLE
3,000 SQ. FT. BASE

700	1 000	1 300	1 500	1 800	2 000	2 400	2 700	3 000
1.30	1.23	1.17	1.13	1.09	1.07	1.04	1.02	1.00

3 000	3 200	3 400	3 700	4 000	5 000	6 000	7 000	10,000
1.00	.99	.98	.97	.96	.93	.90	.88	.85

COST FACTORS
3,000 SQ. FT. BASE

CONST. CLASS 'D'

Class Shape \	D - 3	D - 4	D - 5	D - 6	D - 7	D - 8	D - 9	D - 10
A	6.05	6.90	7.65	8.55	10.05	11.70	13.25	14.65
B	6.45	7.30	8.10	9.05	10.60	12.25	13.85	15.30
C	6.80	7.75	8.60	9.55	11.20	12.90	14.50	15.90
Storey Ht.	12'	12'	12'	12'	14'	16'	18'	18'

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.

NOTE:

Store fronts, basements, heating cooling and sprinklers are NOT included in rates. Second storey cost factors may be obtained by applying 85% to first floor rates.

GENERAL GUIDE AND CHARACTERISTICS

NEIGHBOURHOOD CENTRE

Normal Area Range:

4,000 to 120,000 square feet.

Type of Stores:

Foodmarket, stores geared to supply convenience goods and services (drug and hardware stores, beauty and barber shops, laundry and dry cleaning services, etc.)

General Comments:

This centre affords all the economic advantages of present day building practices, common party walls and stock store front designs.

Such small centres usually depend upon those people numbering between 5,000 - 20,000 in a neighbourhood, living within 5 - 10 minutes driving distance.

COMMUNITY CENTRE

Normal Area Range:

120,000 to 350,000 square feet.

Type of Stores:

Junior department stores, variety stores, supermarket, stores providing shopping goods such as home furnishings and apparel, as well as those that meet the day-to-day needs of the customers.

General Comments:

This type of centre is constructed economically, utilizing current building techniques, common party walls, mall type walks and accessibility to parking areas.

A market of 20,000 - 100,000 persons may be served within a 3 - 4 mile radius.

OF SUBURBAN SHOPPING CENTRES

REGIONAL CENTRE

Normal Area Range: 350,000 square feet and over in size.

Type of Stores: Major department stores as principal attractions, with perhaps 100 smaller stores offering opportunities for shopping in a wide variety of specialty and other goods, as well as permitting comparative shopping.

General Remarks: This type of centre reflects the most elaborate convenience such as multiple store entries, escalators, approach ramps and mall-type walk-ways. The composition and use of select construction materials are above normal, insuring a long utility span and the advantages of limited maintenance. A trading area including at least 100,000 - 250,000 persons with a radius of 5 - 6 miles is required for a regional centre. Accessibility from two or more major highways is desirable. In store facilities provided, regional centres resemble downtown shopping districts more closely than do the smaller centres.

SHOPPING CENTRE

COST FACTORS REGIONAL

10,000 SQ. FT. BASE

CONST. CLASS 'B'

Class Shape \	B - 6	B - 7	B - 8	B - 9	B - 10
A	13.70	15.05	16.55	18.10	19.85
B	14.25	15.60	17.15	18.80	20.55
C	14.80	16.25	17.05	19.55	21.35
Storey Ht.	16'	16'	16'	16'	16'

AREA ADJUSTMENT TABLE

10,000 SQ. FT. BASE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75

COST FACTORS NEIGHBOURHOOD

10,000 SQ. FT. BASE

CONST. CLASS 'D'

Class Shape \	D - 4	D - 5	D - 6	D - 7	D - 8
A	6.35	7.50	8.55	9.65	10.80
B	6.70	7.90	9.00	10.20	11.40
C	7.15	8.35	9.55	10.80	12.05
Storey Ht.	11'	12'	12'	12'	12'

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.

NOTE:

Store fronts, basements, heating, cooling and sprinklers are NOT included in the rates.

Second storey cost factors may be obtained by applying 85% to first storey rates.

Second storey office cost factors may be obtained by applying 80% of first storey office rates - Section 4C.

Second storey residential apartment cost factors may be obtained from

SHOPPING CENTRE

COST FACTORS NEIGHBOURHOOD

10,000 SQ. FT. BASE

CONST. CLASS 'C'

<u>Class Shape</u>	C - 4	C - 5	C - 6	C - 7	C - 8	C - 9
A	8.25	9.40	10.65	12.00	13.45	15.05
B	8.70	9.85	11.10	12.50	14.05	15.75
C	9.15	10.40	11.60	13.10	14.70	16.40
Storey Ht.	12'	12'	12'	12'	12'	12'

COST FACTORS COMMUNITY

10,000 SQ. FT. BASE

CONST. CLASS 'C'

<u>Class Shape</u>	C - 5	C - 6	C - 7	C - 8	C - 9	C - 10
A	9.70	10.85	12.15	13.60	15.10	16.75
B	10.15	11.30	12.70	14.15	15.70	17.45
C	10.60	11.85	13.20	14.75	16.40	18.15
Storey Ht.	12'	12'	12'	12'	12'	12'

COST FACTORS REGIONAL

10,000 SQ. FT. BASE

CONST. CLASS 'C'

<u>Class Shape</u>	C - 5	C - 6	C - 7	C - 8	C - 9	C - 10
A	10.15	11.40	12.75	14.25	15.85	17.55
B	10.60	11.90	13.30	14.80	16.45	18.25
C	11.10	12.50	13.85	15.45	17.10	19.00
Storey Ht.	14'	14'	14'	14'	14'	14'

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.NOTE:

Store fronts, basements, heating, cooling and sprinklers NOT included in the rates.

Second storey cost factors may be obtained by applying 85% to first storey rates.

Second storey office cost factors may be obtained by applying 80% of first storey office rates - Section 4C.

Second storey residential apartment cost factors may be obtained from Section 2.

SPECIFICATIONS FOR

CLASS COMPONENTS	B-6	B-7
FOUNDATIONS	Reinforced concrete	Reinforced concrete
FLOORS	5" Reinforced concrete slab on compacted fill.	5" Reinforced concrete slab on compacted fill.
STRUCTURAL FRAMING	Reinforced concrete.	Reinforced concrete.
EXTERIOR WALLS	Sand lime brick 1" insulation. Concrete block back-up	50% Brick and back-up 50% Precast Panels and Glass
ROOF STRUCTURE	Reinforced concrete 1½" Rigid insulation B.U.R. Typical bay 20' x 25'	Reinforced concrete 2" Rigid insulation B.U.R. Typical bay 20' x 30'
INTERIOR FINISHES FLOORS	V/A Tile with terrazzo or equiv. at entrance.	V/A Tile with terrazzo or ceramic tile or equiv. at entrance.
WALLS	Strapped drywall. Painted.	Strapped drywall. Painted with some vinyl covering.
CEILING	Good quality acoustic tile - metal suspension.	Good quality acoustic tile-metal suspension or equiv.
PLUMBING	Standard grade comm. fixtures, metal toilet partitions	Good quality comm. fixtures good quality toilet partitions.
ELECTRICAL	Good quality fluorescent fixtures and spotlights.	Good quality fluorescent fixtures and spotlights

SPECIFICATIONS FOR

CLASS COMPONENTS \	C-6	C-7
FOUNDATIONS	8"-10" Concrete block or equiv.	10" Concrete block or equiv.
FLOORS	5" Reinforced concrete slab on compacted fill.	5" Reinforced concrete slab on compacted fill.
STRUCTURAL FRAMING	Full steel frame or load bearing masonry	Full steel frame or load bearing masonry.
EXTERIOR WALLS	Sand lime brick 1" insulation. Concrete block back-up.	50% Brick and back-up 50% Precast panels and glass.
ROOF STRUCTURE	Open web steel joists metal decking, Typical span 25'-30', 1½" Rigid insulation and B.U.R.	Open web steel joists metal pan, Typical span 30'-40', 2" Rigid insulation and B.U.R.
INTERIOR FINISHES	V.A.T. with terrazzo or equiv. at entrance	V.A.T. with terrazzo or ceramic tile or equiv. at entrance
FLOOR		
WALLS	Strapped drywall. Painted.	Strapped drywall. Painted with some vinyl covering.
CEILING	Good quality acoustic tile - metal suspension.	Good quality acoustic tile - metal suspension or equiv.
PLUMBING	Standard grade comm. fixtures, metal toilet partitions.	Good quality comm. fixtures, good quality toilet partitions.
ELECTRICAL	Good quality fluorescent fixtures and spotlights.	Good quality fluorescent fixtures and spotlights.

DEPARTMENT STORES

CONST. CLASS 'B'

B-8	B-9
Reinforced concrete	Reinforced concrete
5" Reinforced concrete slab on compacted fill.	6" Reinforced concrete slab with vapour barrier on compacted fill.
Reinforced concrete.	Reinforced concrete.
Precast panels with exposed dolomite aggregate or equiv.	Natural fieldstone with some limestone, masonry back-up.
Reinforced concrete 2" Rigid insulation B.U.R. Typical Bay 30' x 30'	Reinforced concrete 2" Rigid insulation B.U.R. Typical bay 30' x 40'
50% V/A tile - 50% broadloom with areas of quarry tile or terrazzo.	Broadloom, terrazzo and quarry tile.
Strapped drywall. Vinyl covered.	Plaster and wood panels.
Select quality acoustic suspension system with illuminated ceiling in some areas.	Decorative plaster or equiv.
Select quality comm. fixtures with select quality metal partitions.	Select quality comm. fixtures with marble toilet partitions.
Custom incandescents spots and recessed fluorescents.	Custom chandeliers spots and concealed fluorescents.

DEPARTMENT STORES

CONST. CLASS 'C'

C-8	C-9
10" - 12" Concrete block or equiv.	12" Concrete block or equiv.
5" Reinforced concrete slab on compacted fill.	6" Reinforced concrete slab with vapour barrier on compacted fill.
Full steel frame or load bearing masonry.	Full steel frame or load bearing masonry.
Precast panels with exposed dolomite aggregate or equiv.	Natural fieldstone with some limestone,masonry back-up.
Long span steel joists metal pan, Typical span 40'+ 2" Rigid insulation and B.U.R.	Long span steel joists metal pan, Typical span 40'+, 2" Rigid insulation and B.U.R.
50% V.A.T. -50% broadloom with areas of quarry tile or terrazzo.	Broadloom, terrazzo and quarry tile.
Strapped drywall. Vinyl covered.	Plaster and wood panels.
Select quality acoustic suspension system with illuminated ceiling in some areas.	Decorative plaster or equiv.
Select quality comm. fixtures with select quality metal partitions.	Select quality comm. fixtures with marble toilet partitions.
Custom incandescents spots and recessed fluorescents.	Custom chandeliers spots and concealed fluorescents.

DEPARTMENT STORES

COST FACTORS

(BASE 50,000 SQ. FT.- HEIGHT 16' 0")

CONT. CLASS 'C'

Class Shape \	C - 6	C - 7	C - 8	C - 9
A	9.60	10.50	11.85	13.15
B	9.90	10.80	12.20	13.55
C	10.10	11.05	12.45	13.80

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.AREA ADJUSTMENT TABLE

5M	6M	7M	8M	9M	12M	14M	16M
1.31	1.29	1.27	1.25	1.23	1.19	1.17	1.15
18M	21M	24M	30M	35M	39M	45M	50M
1.13	1.11	1.09	1.06	1.04	1.02	1.01	1.00
55M	60M	70M	90M	110M	120M	140M	160M
.99	.98	.96	.93	.91	.90	.88	.87

COST FACTORS

(BASE 50,000 SQ. FT.- HEIGHT 16' 0")

CONT. CLASS 'B'

Class Shape \	B - 6	B - 7	B - 8	B - 9
A	11.00	11.75	13.00	14.50
B	11.25	12.05	13.35	14.85
C	11.50	12.35	13.85	15.25

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

SHOPPING CENTRE MALL AREA

SPECIFICATIONS FOR INTERIOR FINISHES

Class Component	6	7	8
FLOOR	Vinyl asbestos tile or equiv.	Terrazzo or equiv.	Quarry tile or equiv.
CEILING	12" x 12" acoustic tile or equiv.	2' x 4' suspended panels or equiv.	Textured plaster or equiv.
ELECTRICAL	Open fluorescent	Recessed fluorescent spots	Recessed & indirect fluorescents, spots and hanging fixtures

MALL AREA-COST FACTORS

(BASE 10,000 SQ. FT.)

Class Shape	6	7	8
A	7.75	9.50	11.90
B	8.15	9.90	12.30
D	8.50	10.30	12.70
HEIGHT	16'	16'	16'

HEIGHT ADJ.: 3% for each ft. of wall ht. variation

AREA ADJUSTMENT TABLE

(BASE 10,000 SQ. FT.)

2000	3000	4000	5000	6000	7000	8000	9000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10000	11000	13000	15000	18000	20000	24000	27000
1.00	.98	.96	.94	.92	.91	.90	.89
30000	35000	40000	50000	70000	90000	100000	150000
.88	.86	.85	.83	.79	.77	.76	.75

All the above based on a steel frame warehouse type building with finishing allowance added.

Cost factors do not include heating, ventilation, air conditioning, sprinklers or basements, for these items refer to the commercial additive section.

SPECIFICATIONS FOR

CLASS COMPONENTS	C - 4	C - 5
FOUNDATIONS	Plain concrete footings; con block walls.	Plain or reinforced concrete footings; con block or con walls.
FLOORS	4" concrete slab on com- pacted fill.	4" reinforced concrete slab on compacted fill.
STRUCTURAL FRAMING	Low cost load bearing construction.	Std load bearing or light weight full steel framing.
EXTERIOR WALLS	8-10" con block walls or equiv.	8-10" masonry walls:- standard quality face brick with con block back-up.
ROOF STRUCTURES	Wooden joists or beams; wd or lt wt metal decking; 4-ply built-up roofing.	Open web steel joists; typical span 20 - 25'; lt weight metal decking; 1" rigid insulation and 5-ply built up roofing.
INTERIOR FINISHES		
Flooring	Colored concrete.	Asphalt or vinyl asbestos.
Walls	Painted.	Painted.
Ceiling	Open	Average good quality acous- tic tile or equiv.
STORE FRONT	Wood or steel framed.	Minimum aluminum framed.
PLUMBING	Economy grade fixtures; wooden toilet partitions.	Standard grade comm fix- tures; wooden or low cost metal toilet partitions.
ELECTRICAL	BX wiring; low cost fluorescent or incandescent fixtures.	BX or conduit wiring; average quality open strip fluorescent fixtures.

DISCOUNT STORES

CONSTRUCTION CLASS-C

C - 6	C - 7	C - 8.
Reinforced concrete footings; con block or con walls.	Reinforced concrete footings and walls.	Reinforced concrete footings and walls.
4" reinforced concrete slab on compacted fill.	4-5" reinforced concrete slab on compacted fill.	5" reinforced concrete slab with vapour barrier on compacted fill.
Good quality load bearing or full steel framing.	Good quality full steel framing.	Good quality full steel framing.
8-10" masonry walls:- select face brick with con block or common brick back-up. Rear wall - con blk.	10-12" masonry walls:- select face brick with natural stone sections and con block or common brick back-up.	12" masonry walls:- select face brick, natural field stone or equiv. with masonry back-up.
Open web steel joists; typical span 25 - 30'; med gauge metal decking; 2" rigid insulation and 5-ply built-up roofing.	Long span steel joists; typical span 30 - 40'; med gauge metal decking; 2" rigid insulation and 5-ply built-up roofing.	Long span steel joists; typical span 40' +; med gauge metal decking; 2" rigid insulation and 5-ply built-up roofing.
Vinyl asbestos or vinyl. Pegboard, painted above. Good quality acoustic tile or equiv.	Vinyl or terrazzo. Pegboard, painted drywall above or equiv. Good quality acoustic tile with plastic egg crate panels to some areas or equiv.	Terrazzo or equiv. Pegboard, painted plaster above or equiv. Good quality acoustical plaster, anodized aluminum honeycomb panels or equiv.
Average quality aluminum framed; 5-15% of total perimeter wall.	Average quality aluminum framed; 15-20% of total perimeter wall.	Good quality aluminum framed; 25% of total perimeter wall.
Std grade comm fixtures; metal toilet partitions.	Good quality comm fixtures; metal toilet partitions.	Select quality comm fixtures; metal or marble toilet partitions.
BX or conduit wiring; Average quality open strip fluorescent fixtures.	Conduit wiring; Good quality open or recessed fluorescent fixtures or equiv.	Conduit wiring; Good quality recessed fluorescent fixtures; custom designed incandescent fixtures.

CLASS COMPONENTS	C - 4	C - 5	
FOUNDATIONS	Conc blk or poured conc.	Poured or reinforced conc.	
FLOORS	4" concrete slab on compacted fill.	4" reinforced concrete slab on compacted fill.	
STRUCTURAL FRAMING	Low cost load bearing.	Standard load bearing construction or light steel framing.	
EXTERIOR WALLS	8-10" concrete block walls or equiv.	8-10" masonry walls: - standard quality face brick with concrete block back-up; rear wall concrete block.	
ROOF STRUCTURE	Wood joists or beams; wood or light gauge metal decking; 4-ply built-up roofing.	Open web steel joists; typical span 20 - 25'; lt weight metal decking; 1" rigid insulation and 5-ply built-up roofing.	
INT.FINISHES (General area)	Floors: Walls: Ceilings:	Colored Painted masonry. Painted underside of roof decking.	Asphalt or vinyl asbestos Painted masonry. Low cost acoustic tile or equiv.
INT.FINISHES (Special areas)			
PLUMBING	Economy grade washroom fixtures; wooden toilet partitions.	Standard grade commercial washroom fixtures; wooden or low cost metal toilet partitions.	
ELECTRICAL	BX wiring; cheap fluorescent or incandescent fixtures.	BX or conduit wiring; average quality fluorescent fixtures.	

CONSTRUCTION CLASS-C

C - 6	C - 7	C - 8
Reinforced concrete.	Reinforced concrete.	Reinforced concrete.
5" reinforced concrete slab on compacted fill.	5" reinforced concrete slab on compacted fill.	5" reinforced concrete slab with vapour barrier on compacted fill.
Good quality load bearing construction or full steel framing.	Full steel framing.	Full steel framing or pre-stressed concrete.
8-10" masonry walls: - select face brick with conc block or common brick back-up.	10-12" masonry walls: - select face brick or natural stone with conc blk or common brick back-up.	12-16" masonry walls: - select face brick, natural field stone or cut stone with masonry back-up; Precast concrete panels.
Open web steel joists; typical span 25 - 30'; med gauge metal decking; 2" rigid insulation and 5-ply built up roofing.	Long span steel joists; typical span 30 - 40'; med gauge metal decking; 2" rigid insulation and 5-ply built-up roofing.	Long span steel joists; typical span 40' +; med gauge metal decking; 2" rigid insulation and 5-ply built-up roofing.
Vinyl asbestos or vinyl throughout.	Terrazzo or equiv.	Terrazzo or equiv.
Drywall or plaster, painted or papered.	Plaster with paint, good quality canvas or vinyl fabrics.	Plaster painted; arborite wainscotting or equiv.
Plaster or acoustic tile.	Good quality plaster acoustic tile or acoustical plaster.	Select quality plaster, acoustic tile or illuminated ceiling.
	Ceramic tile or terrazzo to washroom floor; Terr or cer tile to meat area floors and walls.	Ceramic tile or terrazzo to washroom floor; Mosaic or ceramic tile to meat area floors and walls; Quarry tile floor to check-out area.
Standard grade commercial washroom fixtures; metal toilet partitions.	Good grade commercial washroom fixtures; metal toilet partitions.	Select grade commercial washroom fixtures; metal toilet partitions.
Conduit wiring; average quality fluorescent fixtures.	Conduit wiring; good quality fluorescent fixtures and spotlights.	Conduit wiring; select quality fluorescent fixtures and spotlights.

SUPERMARKETS

COST FACTORS 10,000 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \	C - 4	C - 5	C - 6	C - 7	C - 8	C - 9
A	6.45	7.80	9.20	10.65	12.20	13.80
B	6.90	8.25	9.65	11.15	12.70	14.35
C	7.30	8.65	10.05	11.65	13.15	14.90
Storey Ht.	16'	16'	16'	16'	16'	16'

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.

NOTE: Store fronts, basements, heating, cooling sprinklers and cold storage units are NOT included in the rates.

AREA ADJUSTMENT TABLE

10,000 SQ. FT. BASE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75

DISCOUNT STORES

COST FACTORS

10,000 SQ.FT. BASE

CONST. CLASS 'C'

Class Shape \	C - 4	C - 5	C - 6	C - 7	C - 8
A	6.30	7.80	9.60	11.40	13.80
B	6.60	8.10	9.90	11.70	14.15
C	6.95	8.45	10.25	12.05	14.60
Storey Ht.	14'	14'	15'	16'	16'

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.

NOTE: Basements, heating, cooling and sprinklers are NOT included in the rates.
Normal store fronts as found with discount stores.

FAST FOOD AND FREE STANDING RESTAURANTS

GENERAL COMMENTS

The following specifications and cost factors developed from a base year of 1969 will cover most of the Fast Food and Free Standing Restaurant operations.

The specifications are of a general nature with as much information as possible given to assist the assessor in making a classification.

The cost factors include a normal store front and partitions to divide public areas from service and preparation areas.

Additives to the basic structure such as heating, air conditioning, ventilation, cold storage units, basements, canopies and mezzanines will be found in the commercial additives section.

It should be noted that the higher quality structures have been designed for maximum use with minimum maintenance by the use of maintenance free materials.

SPECIFICATION FOR FAST FOOD

CLASS COMPONENTS	C - 3	C - 4	C - 5
FOUNDATIONS	Con. footings, con. blk. wall.	Con. footings, con. blk. wall.	Con. footings, con. blk wall.
FLOOR STRUCTURE	4" Con. pad on compacted fill.	4" con. pad on compacted fill.	4" re. slab on compacted fill.
STRUCTURAL FRAME	Low cost load bearing construction	Low cost load bearing construction.	St. load bearing or light weight steel frame.
EXTERIOR WALLS	8" concrete block, painted.	8-10" con. blk.	8"-10" Masonry - quality face brick or equiv. to one wall.
ROOF STRUCTURE	Wood beams, plywood decking. 4 Ply B.U.R. Shed roof.	Wood joists or beams wood or light weight decking. 4 Ply B.U.R. modified roof line.	Laminated wood beams or open web steel joists, wood or light ga. mtl. deck-1" insulation & B.U.R.
INTERIOR FINISHES			
FLOORS	Painted concrete	Coloured con. or low cost tile.	Asphalt or vinyl asbestos tile.
WALLS	Painted block.	Painted block.	Painted block or drywall.
CEILINGS	Painted drywall.	Low cost tile.	Ave. quality acoustic tile or equiv.
STORE FRONT	Minimum - wood frame	Low cost wood or steel frame.	Minimum aluminum framed.
PLUMBING	Minimum - Economy grade fixtures.	Economy grade fixtures with wood partitions.	Std. grade commercial fixtures/wood or low cost metal partitions.
ELECTRICAL	Bx wiring with low cost fluorescent or incandescent fixtures	Bx wiring, low cost fluorescent or incandescent fixtures.	Bx or conduit wiring, good quality open strip fluorescent fixtures.

AND FREE STANDING RESTAURANTS

C - 6	C - 7	C - 8	C - 9
Re. con. footings con. blk. or equiv.	Re. con. footings and walls.	Re. con. footings and walls.	Re. con. footings and walls.
4" re. con. slab on compacted fill.	4"-5" re. con. slab on compacted fill.	5" re. con. with vapour barrier on compacted fill.	5" re. con. with vapour barrier on compacted fill.
Good quality load bearing or full steel framing.	Good quality load bearing or full steel framing.	Good quality load bearing or full steel framing.	Good quality load bearing or full steel framing.
8"-10" Masonry - select face brick with back-up. Rear wall exposed con. blk.	10" Masonry - walls with select face brick and back- up or equiv.; some stone facing.	10"-12" Masonry - select face brick, fieldstone or equiv. common brick or blk. back-up.	10"-12" Masonry - select face brick, fieldstone or equiv. common brick or blk. back-up.
Laminated wood beams or open web steel joists/wood or light ga. mtl. deck-2" insulation & B.U.R.	Lam. wood beams or O.W.S.J.s - wood or med. ga. mtl. deck-2" insulation Ornamental roof line with wood shingles. or equiv.	Lam. wood beams or O.W.S.J.s - wood or med. ga. mtl. 2" insulation. Cut up, irregular roof line.	Lam. wood beams or O.W.S.J.s - mtl. decking. 2" insula- tion. Ornamental roof line with hand split cedar shakes.
V/A or vinyl tile with quarry tile in food preparation area.	Vinyl tile or terr- azzo, quarry tile in food preparation area.	Terrazzo with quarry tile in food prepara- tion and serving area.	* Quarry tile & broad- loom throughout.
Painted drywall with some wall covering.	Vinyl cloth or epoxy paint on drywall or equiv.	Vinyl cloth or equiv. - ceramic tile in food preparation area	Vinyl cloth or equiv. - ceramic tile in food preparation area.
Good quality acous- tic tile or equiv.	Good quality acous- tic - with illum- inated ceiling section or equiv.	Good quality acous- tic plaster or equiv. Ornamental ceiling treatment.	Good quality acoustic ceiling or equiv. Ornamental ceiling treatment.
Average quality alum- -inum framed 5%-25% of total wall area.	Average quality alum- -inum framed 20%- 40% of total wall area.	Average quality alum- -inum framed 35 %- 55% of total wall area.	Good quality alum- -inum framed 50%- 75% of total wall area.
Std. grade commer- cial fixtures/metal partitions and pub- lic washrooms.	Good quality commer- cial fixtures/good quality metal par- titions or equiv. Public washrooms.	Good quality commer- cial fixtures. Good quality metal par- titions or equiv. Public washrooms.	Good quality commer- cial fixtures. Good quality metal part- itions or equiv. Public washrooms.
Bx or conduit wir- ing good quality open strip fluores- cent fixtures.	Conduit wiring rec- essed fluorescent fixtures or equiv.	Conduit wiring. Custom incandescent fixtures with rec- essed fluorescent fixtures.	Conduit wiring. Custom chandeliers; spotlights and con- cealed fluorescents.

* Architectural designed for maximum customer appeal with separate entrances & lobbies.

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BASE YEAR 1969

FAST FOOD AND FREE STANDING RESTAURANTS

COST FACTORS

2,000 SQ. FT. BASE

CONST. CLASS 'C'

Class Shape \	3	4	5	6	7	8	9
A	13.00	17.10	23.90	27.55	31.50	35.20	39.00
B	13.60	17.85	25.05	28.80	32.90	36.80	40.75
C	14.20	18.65	26.25	30.10	34.40	38.45	42.60
Storey Ht.	12'	12'	14'	18'	18'	18'	18'

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.NOTE: Cost Factors include store fronts, but NOT Heating, Ventilation and Air Conditioning, or basements, mezzanines and canopies. Refer to Additives.

AREA ADJUSTMENT TABLE

2,000 SQ. FT. BASE

600	700	800	900	1000	1200	1400
1.35	1.31	1.26	1.21	1.17	1.10	1.05
1600	2000	2200	2500	3000	3500	4000
1.02	1.00	.99	.98	.96	.95	.94

ADDITIVES

COLD STORAGE UNITS

COST FACTORS - WOOD CABINET
BASE HEIGHT 8'-0"

UNIT TYPE	Area Temp. Range						
		50	100	150	200	250	300
Sharp Freeze	-15° to -30°	37.75	31.55	27.15	23.90	21.55	19.45
Freezer	5° to -10°	34.80	28.90	24.50	21.25	18.90	17.10
Chiller	10° to 35°	31.55	25.95	22.10	18.90	16.50	14.45
Cooler	35° to 50°	28.90	23.90	20.05	16.80	14.45	12.70

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.COST FACTORS METAL CABINET
BASE HEIGHT 8'-0"

UNIT TYPE	Area Temp. Range						
		50	100	150	200	250	300
Sharp Freeze	-15° to -30°	42.70	36.60	32.15	28.90	26.55	24.50
Freezer	5° to -10°	40.10	34.20	29.80	26.55	24.20	22.10
Chiller	10° to 35°	36.60	30.95	27.15	23.90	21.55	19.15
Cooler	35° to 50°	34.20	28.90	25.35	22.10	19.75	17.70

HEIGHT ADJUSTMENT: 2½% for each foot of wall height variation.NOTE:

The cost factors as shown INCLUDE the costs of the cabinet, door, insulation, electrical wiring and refrigeration.

In costing attached cold storage units utilizing one or more common walls, deduct 7% per common wall, from the cost factors as shown.

COMMERCIAL ADDITIVES

MEZZANINE FLOOR COST FACTORS

TYPE COMPONENTS	A - W	A - S	B - W
FLOOR STRUCTURE	Wooden joists with 1" diagonal sub flooring, plywood sheathing and bridging; Low cost wooden railing to open sides.	Open web steel joists with con floor slab on metal pan; W.I. or pipe railing to open sides.	Wooden joists with 1" diagonal sub flooring, plywood underlay and bridging; Standard wooden railing to open sides.
STAIRWAY	Low cost wooden type with open risers; single width; 2" X 4" handrail.	Con filled steel treads; single width; W.I. or pipe handrail.	Average cost wooden type with open risers; double width; Avg quality balustrade.
STRUCTURAL FRAMING	Perimeter supported by columns of main structure.	Perimeter supported by columns of main structure.	Perimeter supported by columns of main structure.
INTERIOR FINISH Flooring Walls Ceiling			Vinyl asbestos tile. Painted. Average type acoustic tile or equiv.
ELECTRICAL	BX wiring; Porcelain socket fixtures.	BX wiring; Porcelain socket fixtures.	BX wiring; Standard incandescent or fluorescent fixtures.
DESIGN	Storage	Storage	Display and merchandising.
COST PER SQ.FT. OF FLOOR AREA	\$1.75 - 2.00	\$3.50 - 4.00	\$2.75 - 3.00

Note: A-W signifies Type A mezzanine with wood structural framing.

A-S signifies Type A mezzanine with steel structural framing.

COMMERCIAL ADDITIVES

MEZZANINE FLOOR COST FACTORS

B - S	C - W	C - S
Open web steel joists with con floor slab on metal pan; W.I. railing to open sides.	Wooden joists with 1" diagonal sub flooring, plywood underlay and bridging;	Open web steel joists with con floor slab on metal pan;
Con filled steel treads, with vinyl asbestos tread overlay; double width; Average qual balustrade.	Good quality wooden type, with closed risers; carpet overlay; double width; Good quality balustrade.	Con filled steel treads, with carpet overlay; double width; Good quality balustrade.
Perimeter supported by columns of main structure.	Perimeter supported by columns of main structure.	Perimeter supported by columns of main structure.
Vinyl asbestos tile. Painted Average type acoustic tile or equiv.	Carpeting. Drywall or equiv. incl partitions (ratio 1:10) Good quality acoustic tile or equiv.	Carpeting. Drywall or equiv. incl partitions (ratio 1:10) Good quality acoustic tile or equiv.
BX wiring; Standard incandescent fixtures.	BX wiring; Good quality fluorescent fixtures.	BX wiring; Good quality fluorescent fixtures.
Display and merchandising.	Retail store administrative offices.	Retail store administrative offices.
\$4.50 - 5.00	\$5.25 - 5.50	\$6.75 - 7.50

Note: Ratio 1:10 describes proportion of lineal feet of partitioning in relation to the square foot area of mezzanine floor.

ADDITIVES

COMMERCIAL BASEMENT SPECIFICATIONS

CONSTRUCTION CLASS-C

TYPE COMPONENTS	1	2	3
FLOORS	4" con floor slab on compacted fill.	4" con floor slab on compacted fill with vinyl asbestos tile.	4" con floor slab on compacted fill with vinyl asbestos tile.
EXTERIOR WALLS	Con block on masonry with parging.	Con block, masonry or poured concrete.	Con block, masonry or poured concrete.
INTERIOR FINISHES Walls	Nil	Drywall painted or equiv.	Drywall with average quality vinyl wall covering or equiv.
Ceilings	Nil	Low cost acoustic tile or equiv.	Average quality acoustic tile or equiv.
Partitions	Nil	Nil	Necessary drywall partitions or equiv. as required for merchandising.
STAIRWAYS	Wood stairs with wood handrail.	Con filled steel pan treads with balustrade.	Con filled steel pan treads with vinyl asbestos tile finish or equiv. and balustrade.
ELECTRICAL	BX wiring; low cost incandescent fixtures.	BX or conduct wiring; average quality open strip fluorescent fixtures.	BX or conduit wiring; good quality open strip fluorescent fixtures with spotlights.

COMMERCIAL ADDITIVES

COST FACTORS BASEMENT

TYPE	<u>Area Shape</u>	500	1000	1500	2000	3000	5000	10 000	15 000
1	A	2.25	2.05	1.90	1.80	1.70	1.60	1.55	1.50
	B	2.45	2.20	2.00	1.90	1.80	1.75	1.70	1.65
	C	2.55	2.30	2.15	2.05	1.90	1.85	1.80	1.75
2	A	5.10	4.60	4.30	4.00	3.75	3.60	3.25	3.05
	B	5.35	4.80	4.45	4.15	3.95	3.75	3.40	3.25
	C	5.60	5.05	4.70	4.40	4.15	4.00	3.65	3.50
3	A	8.15	7.35	6.90	6.45	6.10	5.80	5.55	5.35
	B	8.40	7.60	7.05	6.60	6.25	5.95	5.75	5.50
	C	8.75	7.90	7.30	6.85	6.50	6.20	5.95	5.75

HEIGHT ADJUSTMENT: Type 1 - 10% for each foot of wall height variation.
Types 2 & 3 - 8% for each foot of wall height variation.

NOTE: Cost factors DO NOT include heating, air conditioning, sprinklers or finished plumbing units.

COMMERCIAL HEATING , AIR CONDITIONING AND VENTILATION
 BASE HEIGHT 15'

SYSTEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVE.	GOOD	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$0.40	\$0.55	\$0.70	\$0.90
	Forced Air (with ducts)	0.50	0.65	0.85	1.00
	Hot Water (Baseboard or Radiators)	0.60	0.85	1.15	1.50
COOLING SYS	Refrigerated Air Conditioning	0.80	1.10	1.50	2.00
	Evaporative Cooler	0.45	.55	0.70	.90
COMBINED	Hot and Chilled Water (Zoned)	1.55	2.25	3.00	3.80
	Warm and Cooled Air (Zoned)	1.10	1.45	1.90	2.45
VENT.	Ventilation	0.20	0.30	0.35	0.45

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).

COMMERCIAL ADDITIVES

CANOPIES

TYPE OF CONSTRUCTION	SQ. FT. RATE
Medium Wooden Frame with Built-Up or Composition Roofing.	\$2.30 -- \$3.00
Medium Steel Frame with Built-Up or Composition Roofing.	\$3.00 -- \$4.00
Medium Steel Frame with Steel Roof Structure.	\$3.50 -- \$4.50
Reinforced Concrete Frame with Reinforced Concrete Roof Slab	\$4.50 -- \$6.00
Reinforced Concrete Frame with Contemporary Designed Roof Slab	\$6.00 -- \$8.00
Architecturally Styled Canopy designed To Harmonize and complement basic structure.	\$15.00 -- \$22.00

NOTE: Range of cost factors allows for size as well as quality.

SPRINKLERS (WET OR DRY SYSTEMS)

AREA	COST PER	SQ. FOOT
		OPEN	CONCEALED
2,000 -- 4,000 Sq. Ft.	\$0.55	\$0.65
4,000 -- 6,000 Sq. Ft.	0.50	0.60
6,000 -- 8,000 Sq. Ft.	0.45	0.55
8,000 -- 10,000 Sq. Ft.	0.40	0.50
10,000 -- 20,000 Sq. Ft.	0.35	0.45
20,000 -- And Up	0.30	0.40

NOTE: Above square foot cost factors to be applied against the total sprinklered floor area. (exterior measurements.)

COMMERCIAL ADDITIVES

STORE FRONTS

The design and construction of store fronts vary greatly and consequently present difficulties in establishing unit costs. Many types of material, such as metal extrusions, types of glass, masonry and non-masonry veneers which vary in quantity and quality are used in various combinations. It is not feasible to describe and provide in-place-costs for all these variations and combinations. The cost schedules, therefore, provide factors for only the most commonly used materials.

The cost of plate glass is rated in terms of breaks and size.

Doors, bulkheads, facing material, etc. are considered additives.

The cost factors as prepared for retail stores, shopping centres and supermarkets include the structural portion of the front of the building, but do not include the cost of the store front itself.

COMMERCIAL ADDITIVES

STORE FRONT GLASS BREAK COST FACTORS
(INCLUDING FRAMING)

TYPE	SIZE	COST PER SQ. FOOT
WOODEN FRAME:	to 25 Square Feet	\$ 2.85
	to 50 Square Feet	3.10
	to 75 Square Feet	3.20
	to 100 Square Feet	3.40
ALUMINUM FRAME: (clear anodized)	to 25 Square Feet	5.50
	to 50 Square Feet	5.70
	to 75 Square Feet	5.80
	to 100 Square Feet	6.00

NOTE:

For coloured aluminum framing, add 10% to the above cost factors, based on break size.

For hard colour anodized aluminum framing, add 20% to the above cost factors, based on break size.

For curved glass breaks, multiply the above cost factors by four, to determine the proper size.

SPECIAL STORE FRONTS

TYPE	COST PER SQ. FOOT
Metal Rolling Grilles	\$8.50 - \$10.00
Sliding Glass Wall (Single track with stacking units)	8.00 - 10.00
Commercial Sliding Doors (Individual track for each)	7.00 - 9.00

ENTRANCE DOOR COST FACTORS
(INCLUDING FRAMING, GLASS, CLOSER AND HARDWARE)

TYPE OF DOOR	COST PER UNIT
Clear Anodized Aluminum Framing with Plate Glass	\$ 225
Coloured Aluminum Framing with Plate Glass	250
All Glass (Armour Plate)	550
Exterior Fir (Solid Core)	60
Metal Framed Revolving	\$7,000 - \$15,000

NOTE: For Single Automatic Entrance - Add \$1,150
For Double Automatic Entrance - add \$2,100

COMMERCIAL ADDITIVES

BULKHEAD FACINGS

<u>TYPE OF MATERIAL</u>	<u>COST PER SQ.FT. OF WALL AREA</u>
Aluminum Sandwich Panels (Insulated)	\$ 2.75
Aluminum Sandwich Panels (Contoured and Insulated)	3.50
Aluminum Siding (Coloured)	0.80
Aluminum Siding (Corrugated and Coloured)	0.45
Asbestos Siding	0.40
Board and Batten (Cedar)	0.50
Brick Veneer (Antique)	2.10
Brick Veneer (Clay Face	2.00
Brick Veneer (Select Common)	1.75
Concrete Block (4" Decor)	1.75
Flagstone	4.00
Glass Block (Coloured)	6.00
Granite (1½" Polished one side)	11.00
Granite (2" Polished one side)	12.50
Granite (4" Polished one side)	14.00
Hardboard (¼" Tempered)	0.25
Limestone (Rough Bed Ashlar)	5.00
Limestone (4" Sawed Bed Ashlar)	6.00
Marble (Domestic)	6.00
Marble (Imported)	8.00
Marble (Imported, very Ornamental)	8.00
Mosaic Tile (Minimum Artwork)	3.00
Mosaic Tile (Pictorial)	4.00
Native Field Stone	4.00
Native Field Stone (4" Ashlar Facing)	4.50
Native Field Stone (6" Ashlar Facing)	5.50
Plywood (½" Exterior Grade)	0.45
Plywood (5/8" Textured)	0.60
Porcelain Steel Panels (Insulated)	3.50
Precast Concrete Panels (2" Gray)	3.50
Precast Concrete Panels (3" - 4" Gray)	4.25
Precast Concrete Panels (5" - 6" Gray)	5.00
Precast Concrete Panels (2" Exposed Aggregate)	4.50
Precast Concrete Panels (3" - 4" Exposed Aggregate)	5.25
Precast Concrete Panels (5" - 6" Exposed Aggregate)	6.00
Shakes (Wood, Stained)	0.65
Sheathing (½" Composition)	0.25
Sheathing (Gypsum Board)	0.25
Sheathing (3/8" Plywood)	0.30
Sheathing (1" Wood, Solid)	0.35
Sheathing (1" Wood, Spaced)	0.20
Shingles (Wood, Stained)	0.55

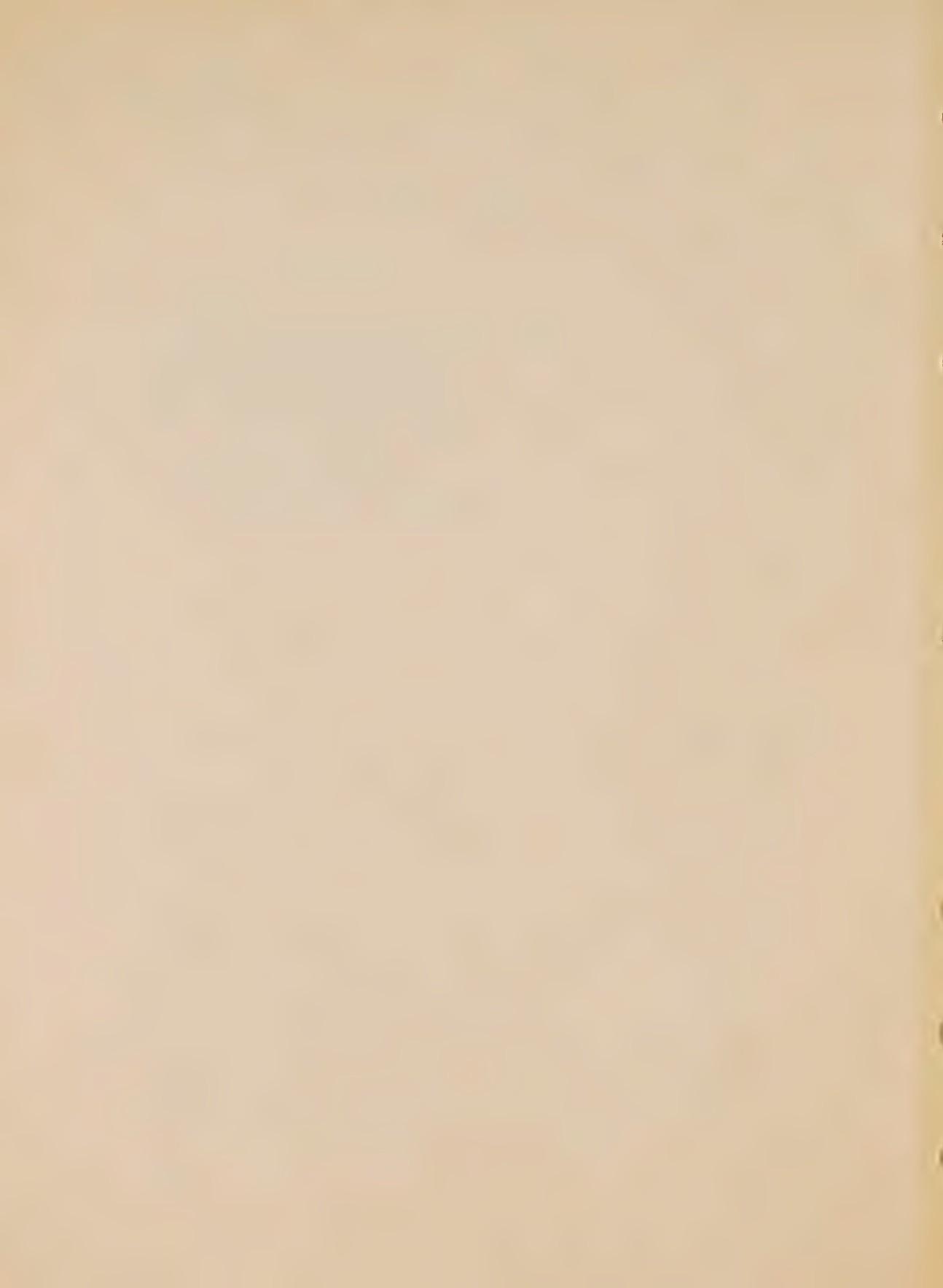
COMMERCIAL ADDITIVES

BULKHEAD FACINGS - Cont'd

<u>TYPE OF MATERIAL</u>	<u>COST PER SQ. FT. OF WALL AREA</u>
Slate (3/8")	\$ 4.00
Stainless Steel (Insulated Sandwich Panels)	3.50
Stucco (on Masonry, 2 Coats)	0.40
Stucco (on Wire Mesh, 3 Coats)	0.60
Stucco (on Metal Lath, 3 Coats)	0.65
Terra Cotta (2" Ceramic Finish)	4.50
Terra Cotta (4" Ceramic Finish)	5.00
Transite (Corrugated)	0.65
Travertine (1 1/4" Exterior)	5.00
Vitrolite	2.25
Wood Siding (Bevel, Cove Clapboard, etc.)	0.40

INTERIOR LININGS

<u>TYPE OF MATERIAL</u>	<u>COST PER SQ. FT. OF WALL AREA</u>
Canvas or Cloth Wall Covering	\$ 0.60
Drywall (on Masonry)	0.40
Drywall (on Wood Studding)	0.40
Flexwood Veneer	1.10
Natural Wood Finish	0.15
Painting	0.25
Pegboard	0.35
Plaster (on Metal Lath)	0.60
Plaster (on Gypsum Lath)	0.55
Plywood Panelling (Softwood)	0.45
Plywood Panelling (Hardwood)	1.00
Tile (Ceramic including Sub Base)	2.00
Tile (Plastic)	1.00
Vinyl Wall Covering (Heavy)	0.85
Wallpaper	0.25
Wood Panelling (3/4" Softwood)	0.60
Wood Panelling (3/4" Hardwood)	1.00



OFFICE BUILDINGS

GENERAL COMMENTS

Specifications follow for the four basic Construction Classes A, B, C & D. From the cost factors shown any office building structure can be calculated (i.e. walk-up to multi-storey) using the same basic rates, with the storey adjustment table.

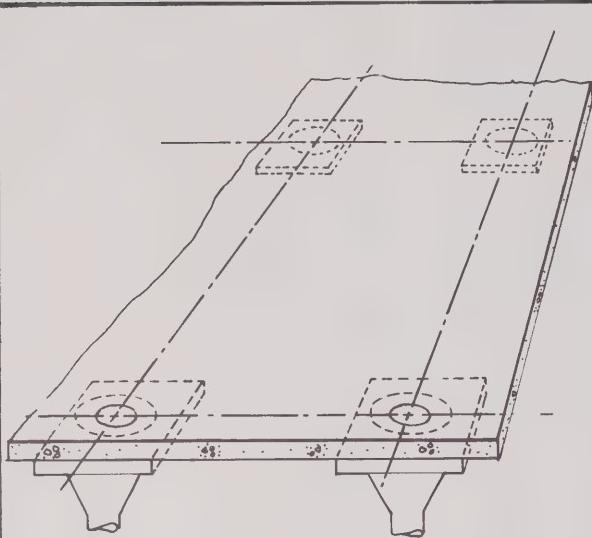
It should be noted that the prevalence of drywall fire-proofing normally indicates Class "C" Construction.

The cost factors contained in the following tables are predicated on average construction costs for office buildings of various quality classes and design. The cost factors include those components shown in the specifications including normal overhead, profit, engineering and architectural fees.

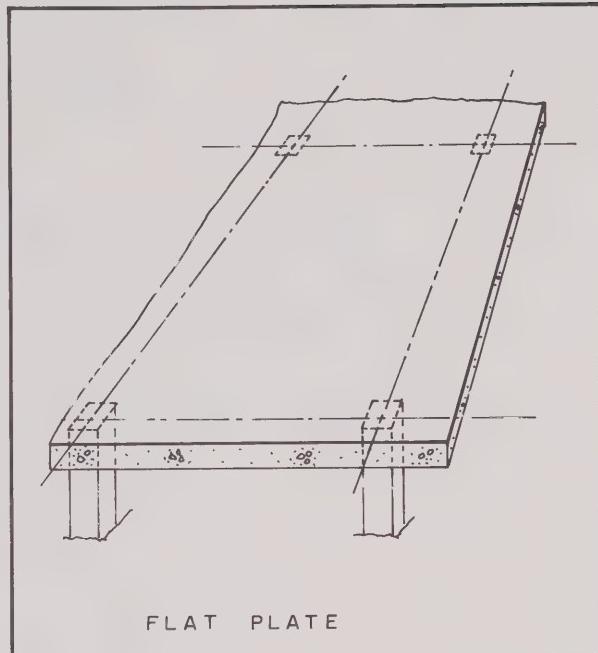
Partitions, elevators, escalators, mechanical systems (except plumbing), basements, garages, penthouses etc., are considered as additives to the basic cost of the structure.

The specifications and cost factors included in this Section are based on information developed from a base year of 1969.

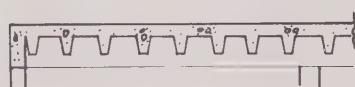
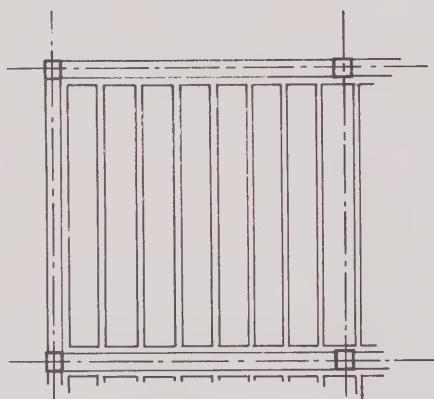
FLOOR DETAILS



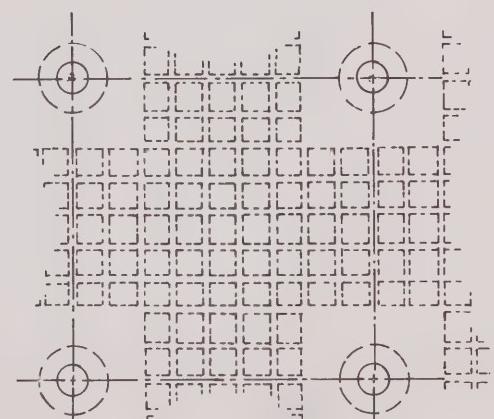
FLAT SLAB



FLAT PLATE

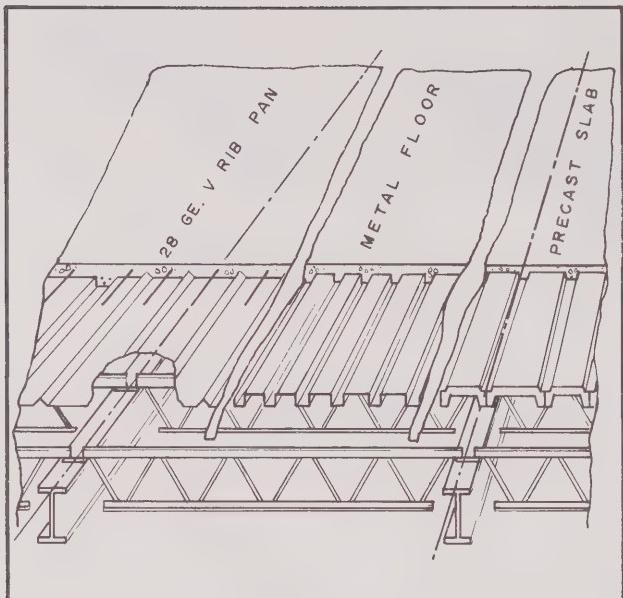


ONE-WAY JOIST CONSTRUCTION

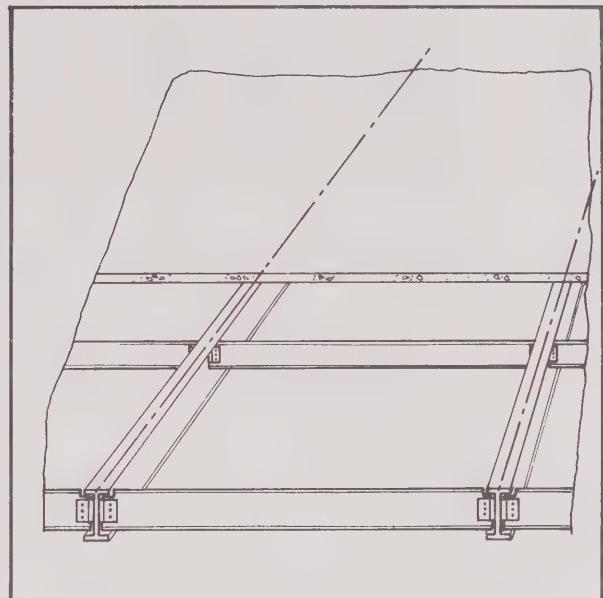


TWO-WAY JOIST CONSTRUCTION
(WAFFLE FLAT SLAB)

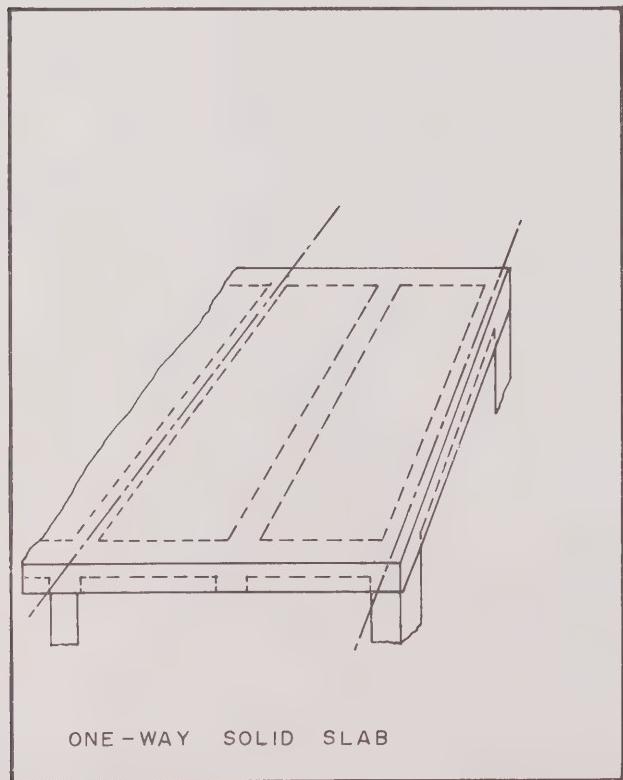
FLOOR DETAILS



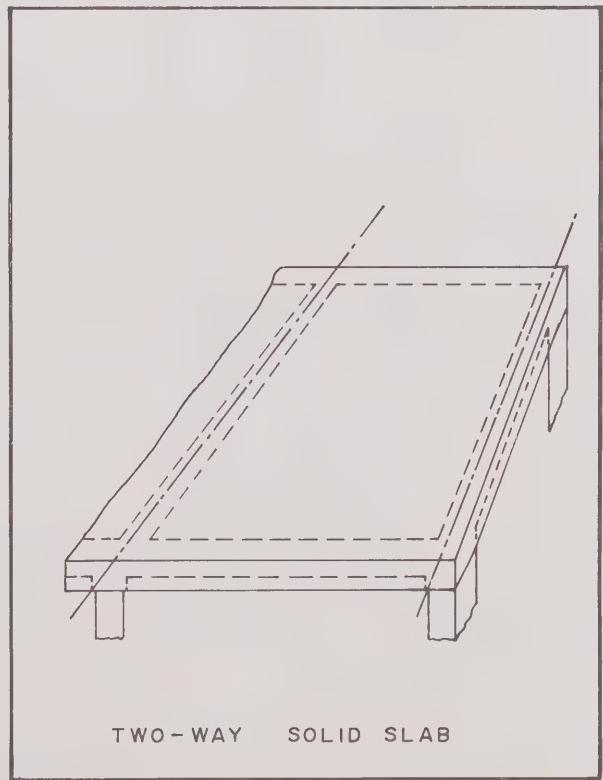
OPEN WEB STEEL JOIST



BEAM & GIRDER

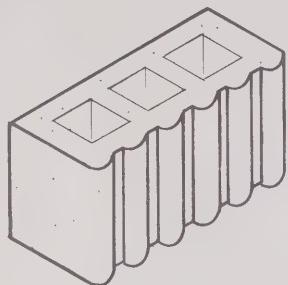


ONE-WAY SOLID SLAB

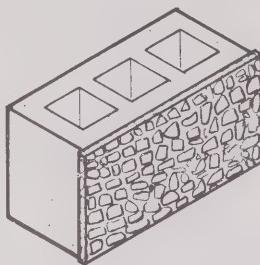


TWO-WAY SOLID SLAB

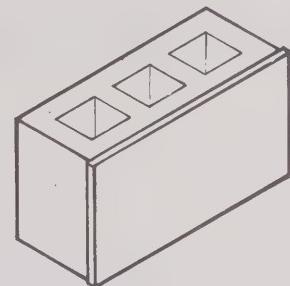
EXTERIOR FINISHES



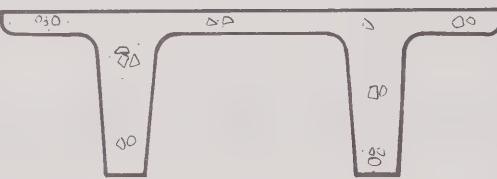
FLUTED BLOCK



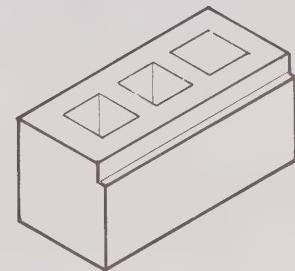
QUARTZITE



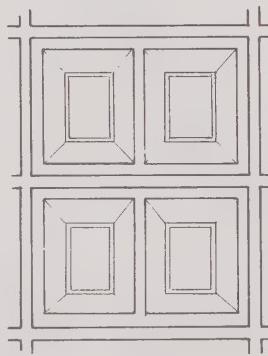
DECOR GLAZED



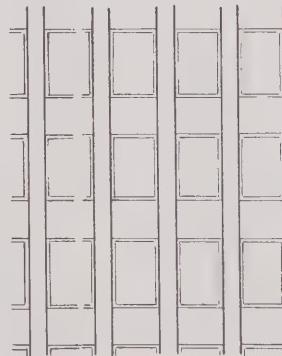
DOUBLE T FOR WALLS



LEDGE

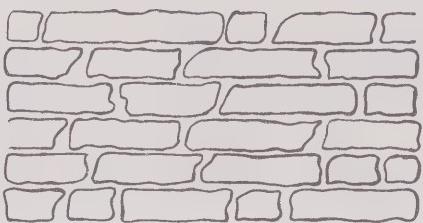


TYPICAL PC PANELS

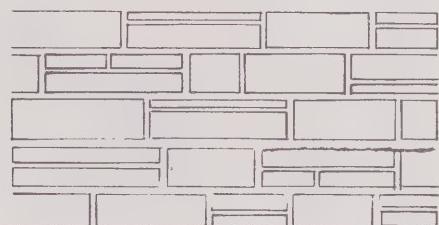


TYPICAL PC UNITS

EXTERIOR FINISHES

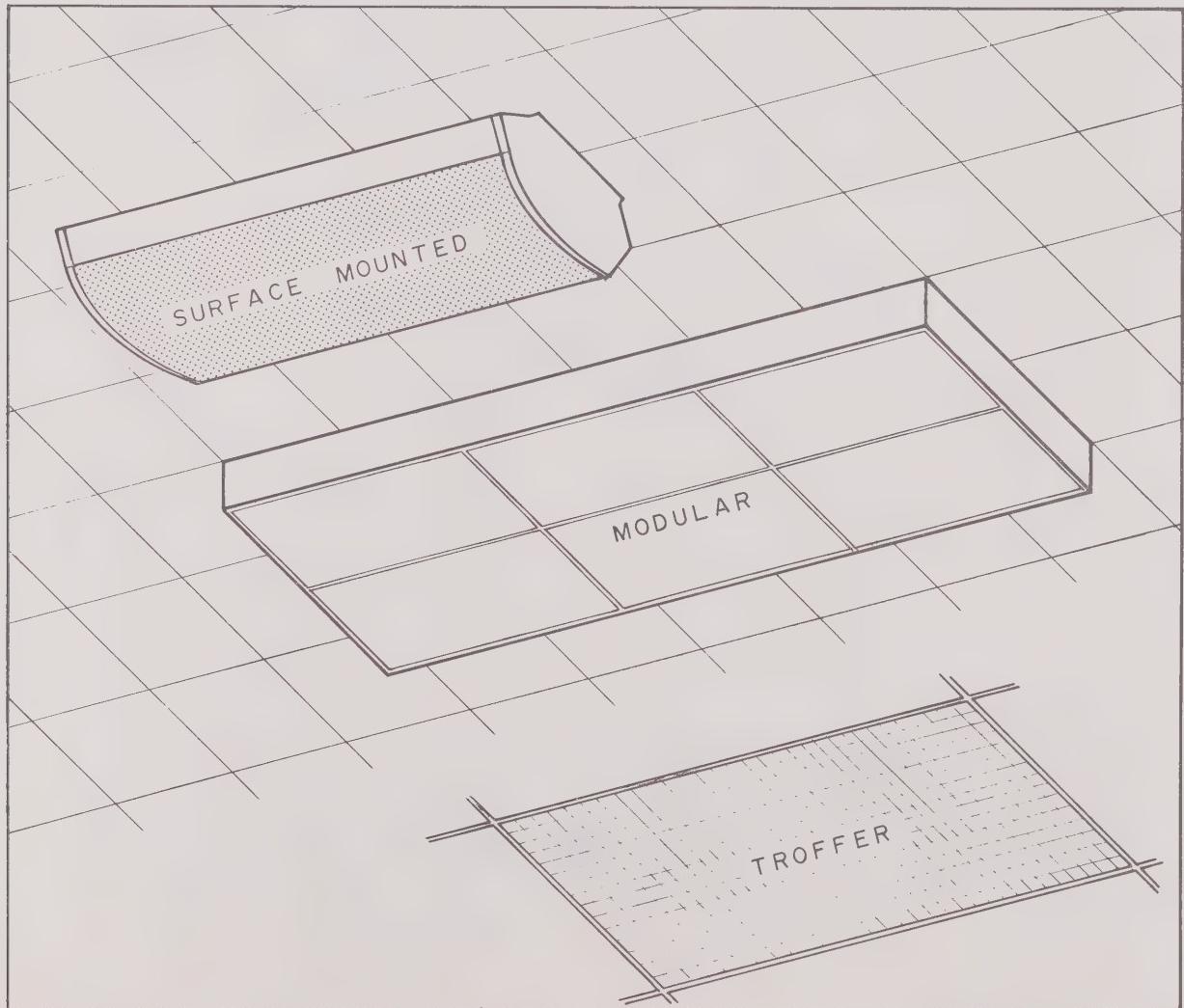


LEDGE ROCK



RANDOM ASHLAR

FLUORESCENT LIGHTING FIXTURES



MATERIAL EQUIVALENTS

MASONRY

(BASE 60% MASONRY - 40% GLAZING)

DESCRIPTION	AS RELATED TO CLASS						
	4	5	6	7	8	9	10
Ledge or Fluted Conc. Block, Rigid Insulation	*						
Solid Common Brick, Rigid Insulation	*						
Porcelain Enamelled Metal Facing Panels, Part Conc. Block back-up. Rigid Insulation		*					
Prepainted Ribbed Metal Siding with Conc. Block back-up. Rigid Insulation.		*					
Quartzite Conc. Block. Rigid Insulation.		*					
Decor glazed block with Rigid Insulation.		*					
Double Tee Precast Conc. units, Gray Finish, and clay face brick with Conc. Block back-up. Rigid Insulation.			*				
Precast Conc. units exposed Quartz or Dolomite Aggregate and Clay Face Brick with Conc. Block back-up. Rigid Insulation.			*				
Hammered Finish Std. Rib Precast Conc. units and Clay Face Brick with Conc. Block back-up. Rigid Insulation.			*				
Double Tee P.C. Units Gray Finish. Rigid Insulation.			*				
Quartz or Dolomite Aggregate, P.C. Units. Rigid Insulation.			*				
Hammered Finish Standard Rib P.C. Units. Rigid Insulation.			*				
Double Tee P.C. Units Dolomite Aggregate. Rigid Insulation.				*			
Marble Panels with Conc. Blk. back-up. Rigid Insulation.				*			
Canadian Marble on common brick back-up. Rigid Insul.					*		
Imported Marble on common brick back-up. Rigid Insul.						*	
Alum. Curtain Wall incl. Porcelain Enamel Panels & Insulation.						*	

MATERIAL EQUIVALENTS

FLOORING (INTERIOR)

DESCRIPTION	AS RELATED TO CLASS					
	5	6	7	8	9	10
Linoleum (Inlaid)	*					
Vinyl Tile		*				
Average Quality Carpet direct to Conc.			*			
Oak Parquet				*		
Stained Oak Parquet					*	
Epoxy Terrazzo					*	
Brick Paving						*
Teak or Walnut Parquet						*
Quarry Tile						*

ELECTRICAL

MODULES	2'-0" x 4'-0"			1'-0" x 4'-0"			2'-0" x 2'-0"		
	S.M.	T	M	S.M.	T	M	S.M.	T	M
TYPE WATTS PSF									
2.0	5	5	5	5	6	6	6	7	7
2.5	5	6	6	6	7	7	7	9	8
3.0	6	6	7	7	8	7	9	9	9
3.5	7	7	7	7	9	8	9	10	9
4.0	7	7	8	8	9	9	9	10	10
4.5	8	8	9	9	10	9	10	10	10
5.0	9	9	9	9	10	9	10	10	10

S.M. = Surface Mounted

T = Troffer

M = Modular (Surface Mounted)

CLASS COMPONENTS	5	6	7
FOUNDATIONS:	Re. conc. wall below frost line, incl. wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR MASONRY:	Clay facebrick with conc. block back-up and insulation.	Precast conc. units with exposed common aggregate; some clay facebrick with conc. blk. back-up. Rigid insulation.	Precast conc. units with exposed common aggregate. Rigid insulation.
GLAZING:	$\frac{1}{4}$ " Tempered Plate Steel framed 40%	$\frac{1}{4}$ " Tempered Plate Alum. framed 40%	$\frac{1}{4}$ " Tempered Plate Alum. framed 40%
ROOF FINISH:	1" Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.
INTERIOR: FLOORING:	Vinyl asbestos tile.	Rubber tile.	Rubber tile.
WALLS:	Drywall painted.	Drywall painted.	Plaster painted.
CEILING:	Mineral acoustic panels with exposed tee bar susp.	Mineral acoustic panels with exposed tee bar susp.	Mineral acoustic tile applied to metal suspension.
CORE:	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted finished walls Washrooms with mosaic tile flooring: ceramic wall tile, good quality ceiling tile: Finished walls & soffits to stairwell: Precast conc. treads.
ELECTRICAL:	Average quality troffer type fluorescent fixtures with louvres. 2'x4' modules 2 Watts per sq. ft.	Average quality troffer type fluorescent fixtures with louvres. 2'x4' modules 2.5 Watts per sq. ft.	Good quality troffer type fluorescent fixtures with louvres. 1'x4' modules. 2.5 Watts per sq. ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Good quality fixtures.

OFFICE BUILDINGS

SECTION 4 C PAGE 9
BASE YEAR 1969

CONST. CLASES 'A & B'

8	9	10
Re. conc. wall below frost line, incl. wpg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, including wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, including wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Ledge rock with conc. block back-up. Rigid insulation.	Cut limestone with conc. block back-up. Rigid insulation.	Polished Granite with brick back-up. Rigid insulation.
Thermo insul. plate alum. framed 40%	Thermo insul. plate. Alum. framed 40%	Thermo insul. plate. Alum. framed 40%.
2" Rigid insul. B.U. Roofing. Alum. Flashing.	2" Rigid insul. B.U. Roofing. Copper Flashing.	2" Rigid insul. B.U. Roofing Copper Flashing
Avg. quality carpeting.	Multi-coloured terrazzo.	Select quality carpeting.
Avg. quality ply. panl.	Plastic laminate wall panl.	Select quality matched wood panelling.
Susp. acoustic metal pans.	Susp. metal lath and acoustical plaster.	Susp. acrylic plastic panels.
Painted finished walls. Washrooms with mosaic tile flooring: ceramic wall tile, good quality ceiling tile: Finished walls & soffits to stairwell: Precast conc. treads.	Painted finished walls. Washrooms with terrazzo flooring: ceramic wall tile. Good quality ceiling tile: finished walls & soffits to stairwell. Pre-cast conc. treads.	Painted finished walls. Washrooms with terrazzo flooring: ceramic wall tile. Good quality ceiling tile. Finished walls & soffits to stairwell: Precast conc. treads.
Good quality troffer type fluorescent fixtures with louvres. 1'x4' modules. 3 Watts per sq. ft.	Good quality troffer type fluorescent fixtures. Acrylic shield. 1'x4' modules. 3.5 Watts per sq. ft.	Good quality troffer type fluorescent fixtures. Acrylic shield. 2'x2' modules. 4 Watts per sq.ft.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.

CLASS COMPONENTS	A5	A6	A7
STRUCTURAL FRAMING:	Open web steel joists Medium gauge metal decking. Fireproofed. Typical bays 20'x20'	Open web steel joists Medium gauge metal decking. Fireproofed. Typical bays 20'x25'	Open web steel joists Medium gauge metal decking. Fireproofed. Typical bays 20'x30'

COST FACTORS
FIRST FLOOR RATES
(BASE 10,000 SQ. FT. - HEIGHT 14'-0")

CONST. CLASS 'A'

CLASS SHAPE	5	5 1/2	6	6 1/2	7	7 1/2
A	14.15	15.10	16.00	17.45	18.90	20.15
B	14.85	15.85	16.80	18.35	19.85	21.15
C	15.55	16.60	17.60	19.20	20.80	23.20

SECOND FLOOR RATES
(BASE 10,000 SQ. FT. - HEIGHT 12'-0")

A	11.30	12.05	12.80	13.95	15.10	16.40
B	11.75	12.55	13.30	14.50	15.70	17.05
C	12.20	13.00	13.80	15.05	16.30	17.70

STOREYS ADJUSTMENT TABLE

NO./STY.S	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FACTORS	1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06	1.06	1.07	1.08	1.09	1.10	1.10

NO./STY.S	17	18	19	20	21	22	23	24	25	26	27	28	29	30
FACTORS	1.11	1.12	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23	1.24

HEIGHT ADJUSTMENT: 2% for each foot of variation in height.

OFFICE BUILDINGS

CONST CLASS 'A'

A 8	A 9	A 10
Beams & girders. Medium gauge metal decking. Fireproofed. Typical bays 20'x30'.	Beams & girders. Medium gauge metal decking. Fireproofed. Typical bays 30'x30'.	Beams & girders. Medium gauge metal decking. Fireproofed. Typical bays 30'x40'.

COST FACTORS

FIRST FLOOR RATES

(BASE 10,000 SQ. FT. - HEIGHT 14'-0")

CONST. CLASS 'A'

8	8 1/2	9	9 1/2	10	CLASS SHAPE
21.40	23.05	24.65	26.45	28.20	A
22.45	24.20	25.90	27.75	29.60	B
23.55	25.35	27.10	29.05	31.00	C

SECOND FLOOR RATES

(BASE 10,000 SQ. FT. - HEIGHT 12'-0")

17.65	19.30	20.90	22.40	23.90	A
18.35	20.05	21.75	23.30	24.85	B
19.05	20.80	22.55	24.20	25.80	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
1.31	1.21	1.15	1.10	1.07	1.05	1.03	1.01	1.00
10,000	11,000	12,000	14,000	16,000	18,000	20,000	25,000	30,000
1.00	.99	.98	.96	.95	.94	.93	.91	.89
30,000	35,000	40,000	50,000	60,000	80,000	100,000	120,000	160,000
.89	.88	.87	.86	.85	.84	.83	.82	.81

SPECIFICATIONS FOR

CLASS COMPONENTS	B5	B6	B7
STRUCTURAL FRAMING:	Re. conc. flat slab with drop panels. Typical bays 20'x20'	Re. conc. flat plate Typical bays 20'x25'	Re. conc. one way solid slab inc. beams. Typical bays 20'x30'

COST FACTORS
FIRST FLOOR RATES
(BASE 10,000 SQ. FT. - HEIGHT 14'-0")

CLASS SHAPE	5	5½	6	6½	7	7½
A	13.75	14.65	15.50	16.90	18.25	19.50
B	14.45	15.40	16.30	17.75	19.15	20.50
C	15.15	16.10	17.05	18.60	20.10	21.50

SECOND FLOOR RATES
(BASE 10,000 SQ. FT. - HEIGHT 12'-0")

A	11.00	11.70	12.40	13.50	14.60	15.90
B	11.45	12.20	12.90	14.05	15.20	16.55
C	11.90	12.65	13.40	14.60	15.75	17.20

STOREYS ADJUSTMENT TABLE

NO./STY.S	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FACTOR	1.01	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.05	1.06	1.07	1.08	1.09	1.09

NO./STY.S	17	18	19	20	21	22	23	24	25	26	27	28	29	30
FACTOR	1.10	1.11	1.12	1.13	1.14	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22

HEIGHT ADJUSTMENT: 2% for each foot of variation in height.

OFFICE BUILDINGS

CONST CLASS 'B'

B8	B9	B10
Re. conc. two way solid slab incl. beams. Typical bays 20'x30'	Re. conc. two way joists (waffle flat slab)-dome formed Typical bays 30'x30'	Re. conc. one way joists (waffle flat slab)-long pan formed. Typical Bays 30'x40'

COST FACTORS

FIRST FLOOR RATES

(BASE 10,000 SQ. FT.-HEIGHT 14'-0")

CONST CLASS 'B'

8	8 1/2	9	9 1/2	10	CLASS SHAPE
20.75	22.15	23.50	24.95	26.40	A
21.80	23.25	24.70	26.20	27.70	B
22.85	24.35	25.85	27.45	29.05	C

SECOND FLOOR RATES

(BASE 10,000 SQ. FT.-HEIGHT 12'-0")

17.20	18.35	19.50	20.70	21.90	A
17.90	19.10	20.30	21.55	22.80	B
18.60	19.85	21.05	22.35	23.65	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
1.31	1.21	1.15	1.10	1.07	1.05	1.03	1.01	1.00
10,000	11,000	12,000	14,000	16,000	18,000	20,000	25,000	30,000
1.00	.99	.98	.96	.95	.94	.93	.91	.89
30,000	35,000	40,000	50,000	60,000	80,000	100,000	120,000	160,000
.89	.88	.87	.86	.85	.84	.83	.82	.81

CLASS COMPONENTS	C 4	C 5	C 6
FOUNDATIONS:	Conc. block walls below frost line. incl. wpgf. & 1" rigid insul. to perimeter Nat. Pldg. Code Std. footings.	Conc. block walls below frost line, incl. wpgf. & 1" rigid insul. to perimeter Nat. Pldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpgf & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" Re.conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR MASONRY	Conc. block with stucco finish or ornate conc. block.	Clay facebrick with conc. block back-up and insulation.	Precast conc. units with exposed common aggregate & some clay facebrick with conc. blk. back-up Rigid insulation.
GLAZING:	$\frac{1}{4}$ " Tempered Plate Steel framed 40%	$\frac{1}{4}$ " Tempered Plate Steel framed 40%	$\frac{1}{4}$ " Tempered Plate Alum. framed 40%
STRUCTURAL FRAMING:	Wooden joists or beams with T & G decking. Typical Bays 15'x15'	Open web steel joists. Metal decking. Typical Bays 20'x20'	Open web steel joists. Metal decking. Typical Bays 20'x25'
ROOF FINISH:	1" Rigid insul. P.U. Roofing G.I. Flashing	1" Rigid insul. B.U. Roofing G.I. Flashing	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing G.I. Flashing
INTERIOR: FLOORING:	Vinyl Asbestos tile.	Vinyl Asbestos tile.	Rubber Tile.
WALLS:	Drywall painted.	Drywall painted.	Drywall painted.
CEILINGS:	Perf. acoustic tile applied to gypsum board or strapping.	Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic panels with exposed tee bar suspension.
CORE:	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.

OFFICE BUILDINGS

SECTION 4C PAGE 15
BASE YEAR 1969

CONST CLASS 'C'

C 7	C 8	C 9	C 10
Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul to perimeter. Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	6" Re.conc. slab on compacted fill.	6" Re.conc. slab on compacted fill.	6" Re.conc. slab on compacted fill.
Precast conc. units with exposed common aggregate. Rigid insulation.	Ledge rock with conc. block back-up. Rigid insul.	Cut limestone with conc. block back-up. Rigid insulation.	Polished Granite with brick back-up. Rigid insulation.
$\frac{1}{4}$ " Tempered Plate Alum. framed 40%	Thermobreak insulated plate. Alum. framed 40%	Thermobreak insulated plate, Alum. framed 40%	Thermobreak insulated plate, Alum. framed 40%
Open web steel joists. Metal decking. Typical Bays 20'x30'	Beams & Girders Metal decking. Typical Bays 20'x30'	Beams & Girders Metal decking. Typical Bays 30'x30'	Beams & Girders Metal decking. Typical Bays 30'x40'
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing G.I. Flashing	2" Rigid insul. B.U. Roofing Alum. Flashing	2" Rigid insul. B.U. Roofing Copper Flashing	2" Rigid insul. B.U. Roofing Copper Flashing
Rubber Tile.	Average quality carpeting.	Multi-coloured terrazzo.	Select quality carpeting.
Plaster painted.	Average quality plywood panelling.	Plaster laminate wall panelling.	Select quality matched wood panelling.
Mineral acoustic tile applied to metal suspension.	Susp. acoustic metal pans.	Susp. metal lath & acoustical plaster.	Susp. acrylic plaster panels.
Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; finished walls & soffits to stairwell; Precast conc. treads.	Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; finished walls & soffits to stairwell; Precast conc. treads.	Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; finished walls & soffits to stairwell; Precast conc. treads.	Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; finished walls & soffits to stairwell; Precast conc. treads.

SPECIFICATIONS FOR

CLASS COMPONENTS	C 4	C 5	C 6
ELECTRICAL:	Avg. quality 96" 2 tube fluorescent fixtures with louvres. Surface mounted. 2 Watts/sq. ft.	Avg. quality troffer type fluorescent fixtures with louvres. 2'x4' modules. 2 Watts/sq.ft.	Avg. quality troffer type fluorescent fixtures with louvres 2'x4' modules. 2.5 Watts/sq.ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Standard quality fixtures.

COST FACTORS

FIRST FLOOR RATES

CONST. CLASS 'C' (BASE 10,000 SQ. FT.—HEIGHT 14'-0")

CLASS SHAPE	4	4 1/2	5	5 1/2	6	6 1/2
A	10.85	11.95	13.10	14.15	15.25	16.60
B	11.40	12.55	13.75	14.85	16.00	17.45
C	11.95	13.15	14.40	15.55	16.75	18.25

SECOND FLOOR RATES

(BASE 10,000 SQ. FT.—HEIGHT 12'-0")

A	8.70	9.60	10.50	11.35	12.20	13.30
B	9.05	9.95	10.90	11.80	12.70	13.80
C	9.40	10.35	11.35	12.25	13.15	14.35

STOREY ADJUSTMENT TABLE

NO.OF STOREYS	3	4	5	6	7	8	9	10
FACTOR	1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06

HEIGHT ADJUSTMENT: 2% for each foot of variation in height.

OFFICE BUILDINGS

CONST. CLASS 'C'

C 7	C 8	C 9	C 10
Good quality troffer type fluorescent fixtures with louvres. 1'x4' modules. 2.5 Watts/sq.ft.	Good quality troffer type fluorescent fixtures with louvres. 1'x4' modules. 3 Watts/sq.ft.	Good quality troffer type fluorescent fixtures. Acrylic Shield. 1'x4' modules. 3.5 Watts/sq.ft.	Good quality troffer type fluorescent fixtures. Acrylic Shield. 2'x2' modules. 4 Watts/sq.ft.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.	Custom quality fixtures.

COST FACTORSFIRST FLOOR RATES

(BASE 10,000 SQ. FT.- HEIGHT 14'-0")

CONST. CLASS 'C'

7	7 1/2	8	8 1/2	9	9 1/2	10	CLASS SHAPE
18.00	19.25	20.50	22.10	23.75	25.55	27.35	A
18.90	20.20	21.50	23.20	24.95	26.80	28.70	B
19.80	21.80	22.55	24.30	26.10	28.10	30.10	C

SECOND FLOOR RATES

(BASE 10,000 SQ.FT.-HEIGHT 12'-0")

14.40	15.65	16.90	18.40	19.95	21.45	22.95	A
14.95	16.25	17.55	19.15	20.75	22.30	23.85	B
15.55	16.90	18.25	19.85	21.55	23.15	24.80	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
1.31	1.21	1.15	1.10	1.07	1.05	1.03	1.01	1.00
10,000	11,000	12,000	14,000	16,000	18,000	20,000	25,000	30,000
1.00	.99	.98	.96	.95	.94	.93	.91	.89
30,000	35,000	40,000	50,000	60,000	80,000	100,000	120,000	160,000
.89	.88	.87	.86	.85	.84	.83	.82	.81

OFFICES

BASEMENT - CLASS 'B'

DESCRIPTION: The following sq. ft. cost factors are related to an unfinished re. conc. structures with conc. fl. (6" thick or more), min. lighting and drainage.

COST FACTORS

(BASE 10,000 SQ.FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-Basement)	3RD LEVEL (Sub-Sub-Basement)
"A"	6.50	7.10	6.65
"B"	6.75	7.35	6.85
"C"	6.95	7.55	7.05

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.16	1.13	1.11	1.09	1.07	1.05	1.02	1.00
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
1.00	.98	.96	.94	.91	.88	.86	.84

BASEMENT - CLASS 'C'

DESCRIPTION: The following sq. ft. cost factors are related to steel structures with conc. fl. (6" thick or more), min. lighting and drainage.

COST FACTORS

(BASE 10,000 SQ.FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-Basement)	3RD LEVEL (Sub-Sub-Basement)
"A"	5.70	6.30	5.85
"B"	5.95	6.55	6.05
"C"	6.15	6.75	6.25

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.25	1.16	1.12	1.09	1.07	1.05	1.02	1.00
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
1.00	.98	.95	.93	.89	.87	.83	.81

ADJUSTMENTS: 10% for each foot of wall height variation.

Conc. susp. slab on metal pan deduct 70¢ per S.F.

Steel Struct. concrete fire proofed Add 0.75 per S.F.

Steel Struct. Fireproofed with sprayed asbestos Add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

OFFICES

FINISHED BASEMENT SPECIFICATIONS- ADDITIVE TO UNFINISHED BASEMENTS -

<u>TYPE COMPONENTS</u>	I	II	III
FLOOR FINISHES:	Vinyl Asbestos Tile.	Terrazzo Tile.	Quarry Tile.
WALL FINISHES:	Painted walls and columns.	Painted plaster walls incl. furred columns.	Vinyl covered finished walls incl. furred cols.
CEILING FINISHES:	Fiberglas panels with Tee Bar Susp.	Mineral acoustic with Tee Bar Susp.	Susp. Mineral acoustic Tile.
ELECTRICAL:	Avg. quality 48" 2-tube Fluorescent Fixtures. Surface mounted 2 Watts/sq. ft.	Avg. quality 1' x 4' Troffer Fluorescent Fixtures. 2 Watts/sq. ft.	Good quality 1' x 4' Troffer Fluorescent Fixtures. 2 Watts/sq. ft.
PLUMBING:	Standard quality Fixtures.	Standard quality Fixtures.	Good quality Fixtures.

COST FACTORS
(BASE INTERIOR HEIGHT 9'-0")

<u>AREA TYPE</u>	1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
I	3.15	3.05	3.00	2.95	2.95	2.90	2.90	2.85
II	5.10	4.95	4.75	4.60	4.50	4.45	4.30	4.20
III	6.85	6.70	6.50	6.35	6.25	6.15	6.00	5.95

<u>AREA TYPE</u>	10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
I	2.85	2.85	2.80	2.75	2.70	2.65	2.60	2.55
II	4.20	4.15	4.00	3.90	3.75	3.65	3.40	3.15
III	5.95	5.85	5.70	5.65	5.45	5.35	5.10	4.90

HEIGHT ADJUSTMENT: 1% for each foot of variation in height.

OFFICES

PARKING GARAGES-CLASS 'B'

DESCRIPTION:- The following square foot cost factors are related to an unfinished reinf. concrete structures with concrete floor (6" thick or more), minimum lighting and drainage.

COST FACTORS

(BASE 60,000 SQ. FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	5.60	6.15	5.75
"B"	5.85	6.35	5.90
"C"	6.00	6.55	6.10

AREA ADJUSTMENT TABLE

8,000	12,000	16,000	20,000	30,000	40,000	50,000
1.18	1.14	1.11	1.09	1.06	1.03	1.01
60,000	70,000	80,000	90,000	100,000	120,000	140,000
1.00	.99	.98	.97	.96	.95	.94

EXTENDED BASEMENT PARKING

COST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	7.60	6.15	5.75
"B"	7.85	6.35	5.90
"C"	8.10	6.55	6.10

ADJUSTMENTS: 10% for each foot of wall height variation.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

OFFICES

PARKING GARAGES - CLASS 'C'

DESCRIPTION:- The following square foot cost factors are related to steel structures with concrete floors (6" thick or more), minimum lighting and drainage.

COST FACTORS
(BASE 60,000 SQ. FT.- HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	4.75	5.25	4.85
"B"	4.95	5.45	5.05
"C"	5.10	5.60	5.20

AREA ADJUSTMENT TABLE

8,000	12,000	16,000	20,000	30,000	40,000	50,000
1.22	1.17	1.14	1.11	1.07	1.04	1.02
60,000	70,000	80,000	90,000	100,000	120,000	140,000
1.00	.98	.97	.96	.95	.93	.92

EXTENDED BASEMENT PARKING

COST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	6.80	5.25	4.85
"B"	7.05	5.45	5.05
"C"	7.30	5.60	5.20

ADJUSTMENTS: 10% for each foot of wall variation. Conc. susp. slab on metal pan deduct 70¢ per S.F. Steel Struct. concrete fire proofed add 0.75¢ per S.F. Steel Struct. fireproofed with sprayed asbestos add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

ADDITIVES

PARTITIONS (BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
I	CLAY TILE - Painted.				
	LOW COST PLYWOOD - Painted or prefinished, wood framed.				
	LOW COST PLYWOOD PARTIALLY GLAZED - Painted or prefinished, Wood framed.				
	HARDBOARD - Prefinished on wooden studs.	\$3.00	\$1.50	\$1.05	\$0.75
II	PLASTER ON LATH - Painted, wood or metal studs				
	SOLID PLASTER - Painted, furred.				
	CONCRETE BLOCK - Painted, incl.				
	DECOR BLOCK, SHADOW BLOCK - etc.				
	DRYWALL - Painted, or wooden studs.	4.00	2.00	1.35	1.00
III	PLASTER - Painted, on clay tile.				
	GLAZED - Conc. block or tile.				
	DRYWALL, VINYL COVERED - Wood or metal studs.				
	DRYWALL PANELS - Painted, metal framed				
	DRYWALL PANELS PARTIALLY GLAZED - Painted, movable, metal framed.				
	DRYWALL, VINYL COVERED - metal framed	5.00	2.50	1.65	1.25

HEIGHT ADJUSTMENT: Allow 10% foot of height variation.

Ratios are based on the proportion of one linear foot of partitioning to the net square footage of floor area.

The above cost factors take into consideration the usual number of doors required for average office installation.

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
IV	GOOD QUALITY PLYWOOD, PARTIALLY GLAZED - Rubbed or prefinished, wood or metal studs.				
	DRYWALL - VINYL COVERED, PARTIALLY GLAZED - Metal framed.				
	ACCORDIAN TYPE, VINYL FABRIC - Wood or steel framed.				
	SELECT QUALITY WOOD PANELLING - Rubbed or prefinished, wood or metal studs.				
	PLASTER - Painted, on conc. block.				
	GOOD QUALITY PLYWOOD - Rubbed or prefinished, wood or metal studs.	\$6.00	\$3.00	\$2.00	\$1.50
V	FULLY GLAZED - Metal framed.				
	METAL PANELS, PARTIALLY GLAZED - Painted, Metal framed.				
	METAL PANELS - Painted, movable, metal framed.	7.00	3.50	2.35	1.75
VI	PLASTIC LAMINATE PANELS - Wood or metal studs.				
	PLASTIC LAMINATE PANELS - Metal framed.				
	PLASTIC LAMINATE PANELS, PARTIALLY GLAZED - Metal framed.	9.20	4.60	3.10	2.30
VII	EXTRUDED ALUM. FRAMED & PLATE GLASS - (Clear, patterned, or Georgian wire)	12.00	6.00	4.00	3.00
MISC.	POLISHED MARBLE OR GRANITE With masonry back-up.	24.00	12.00	8.00	6.00

ADDITIVES

PASSENGER ELEVATORS
SELECTIVE COLLECTIVE

SPEED (FT. PER MIN.)	CAPACITY		ADDITIONAL COST PER STOP
	1500 lbs.	2000 lbs.	
100	\$11,750	\$12,250	+ \$1350
150	\$14,500	\$15,000	+ \$1600

FULLY AUTOMATIC

SPEED (FT. PER MIN.)	CAPACITY				ADDITIONAL COST PER STOP INCL. POWER DRS.
	2500 lbs.	3000 lbs.	3500 lbs.	4000 lbs.	
200	\$ 25,000	\$ 27,000	\$ 29,000	\$ 31,000	+ \$1600
300	33,000	35,000	36,500	38,000	+ 1650
350	36,000	38,000	40,000	42,000	+ 1700
400	41,000	43,000	45,000	47,000	+ 1800
500	50,000	52,000	53,500	55,000	+ 2000
600	59,000	62,000	65,000	68,000	+ 2000
700	69,000	72,000	75,000	78,000	+ 2100
800	80,000	83,000	86,000	89,000	+ 2200
1000	98,000	101,000	104,000	107,000	+ 2200
1200	118,000	122,000	126,000	130,000	+ 2300

NOTE: To compute the cost of passenger elevators, the base cost is determined by the capacity and speed. To arrive at a total cost, the suggested cost per stop, multiplied by the number of stops must be added to the base cost. For those floors which are bypassed by an express elevator apply a bypass cost of \$650. per floor.

ESCALATORS

24" Width .. Per foot Lift	\$2000 -- \$2500
32" Width .. Per foot Lift	2500 -- 3000
48" Width .. Per foot Lift	3000 -- 4000

FREIGHT ELEVATORS

To compute the cost of freight elevators, the base cost per shaft is determined by the capacity and speed of the unit. In addition to the cost per stops, other variables set out below must be considered in arriving at the total cost.

ELECTRIC FREIGHT ELEVATORS

(VARIABLE VOLTAGE GEARED)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$17,900	\$19,050	\$22,400	\$26,900	\$31,500
Add per stop	1,680	1,730	1,850	1,960	2,010

RATES INCLUDE: Cost of single automatic control system and levelling device.ADD: \$1200. per shaft for selective-collective operation.ELECTRIC FREIGHT ELEVATORS

(A.C. RHEOSTATIC CONTROL - SINGLE AUTOMATIC)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$10,300	\$11,800	\$15,700	\$18,300	\$20,600
Add per stop	1,500	1,550	1,625	1,725	1,800
100 FPM	9,000	10,300	13,900	15,800	17,500
Add per stop	1,400	1,450	1,500	1,575	1,625
50 FPM	8,050	9,000	12,000	13,700	15,300
Add per stop	1,350	1,400	1,450	1,500	1,550

- ADD FOR:
- Selective-collective operation - \$1300
 - Automatic levelling device - 1800
 - Rear doors add \$1400 for the first opening and \$900 for each additional opening.
 - Power operation of doors, add \$2700 for the front or rear door, and \$600 for each additional front or rear door.

HYDRAULIC ELEVATORS

The base cost per shaft is 80% of the cost of A.C. rheostatic elevators of comparable speed and capacity. All costs per stop and variations of controls are 100% of the cost of comparable A.C. rheostatic elevator.

SIDEWALK ELEVATORS

Including sidewalk doors - \$8,000 - \$11,000 each

ELECTRIC DUMBWAITERS

Cost per shaft - \$4,000

Add cost per stop - \$700

OFFICES

HEATING & COOLING SYSTEMS

TYPE	DESCRIPTION	COST PER. SQ. FT.			
		LOW COST	AVE.	GOOD	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$ 0.80	\$0.95	\$1.10	\$1.30
	Forced Air (with ducts)	0.80	0.95	1.10	1.30
	Baseboard (Hot Water or Electrical) Induction Units	1.00 1.50	1.10 1.75	1.25 2.00	1.50 2.50
COOLING	Refrigerated Type	1.25	1.40	1.70	2.00
	Evaporative Type	0.80	0.95	1.10	1.30
COMBINES	Hot and Chilled Water (Zoned)	2.50	3.00	3.50	4.00
	Warm and Cooled Air (Zoned)	2.25	2.75	3.00	3.50
SNOW MELTING	Electrical or Hot Water	\$3.00 - 4.00 per Sq.Ft.			

HEIGHT ADJUSTMENT: 3% for each foot of wall height over 15'0".

NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).

SPRINKLERS

COST FACTORS

BUILDING AREA IN SQ. FT.		SYSTEM TYPE	TYPE OF INSTALLATION	
			OPEN	CONCEALED
2,000	to	4,000	Wet or Dry	\$.55
4,000	to	6,000	Wet or Dry	0.50
6,000	to	8,000	Wet or Dry	0.45
8,000	to	10,000	Wet or Dry	0.40
10,000	to	20,000	Wet or Dry	0.35
20,000	And Up	Wet or Dry	0.30	0.35

NOTE: Above Square Foot Cost Factors to be applied against the total sprinklered floor area. (exterior measurements).

ADDITIVES

PENTHOUSE

GENERAL DESCRIPTION: Reinforced concrete floor supported by reinforced concrete or steel frame. Stairs and enclosure c/w firedoors, necessary drainage. Minimal lighting fixtures.

PENTHOUSE - COST FACTORS

(BASE 2500 SQ.FT.-HEIGHT 20'-0")

TYPE	DESCRIPTION OF EXTERIOR CLADDING	RATE
I	Metal ribbed prepainted panels or conc. block.	\$ 9.25
II	Clay face brick with conc. block back-up.	12.30
III	Precast conc. panels with gray finish.	15.30
IV	Precast conc. panels with exposed Dolomite aggregate finish.	17.30
V	Aluminum framed curtain wall.	19.35
VI	Cut limestone with masonry back-up.	22.35

AREA ADJUSTMENT TABLE

1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750
1.30	1.20	1.15	1.10	1.06	1.03	1.00	.97

2,750	3,000	3,250	3,500	3,750	4,000	4,500	5,000
.97	.96	.94	.93	.92	.91	.90	.89

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

CLASS COMPONENTS	D - 4	D - 5
FOUNDATIONS:	Conc. block walls below frost line, incl. wpfg. to perimeter. Nat. Bldg. Code Std. footings.	Conc. block walls below frost line, incl. wpfg. to perimeter, Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.
EXTERIOR CLADDING:	Bevel siding with fibre-board sub sheathing on frame wall structure incl. insulation.	Stucco & wire mesh with sub sheathing on frame wall structure incl. insulation.
GLAZING:	½" Tempered plate. Wood framed 40%	½" Tempered plate. Steel framed 40%
STRUCTURAL FRAMING:	Average quality framing. Wooden joists with T&G decking.	Average quality wooden joists &/or cols. & beams with T&G decking.
ROOF FINISH:	Batt insulation. Ready rolled roofing. G.I. Flashing.	1" Rigid insul. B.U. Roofing. G.I. Flashing
INTERIOR: FLOORING:	Economy grade linoleum.	Vinyl asbestos tile.
WALLS:	Drywall painted.	Drywall pointed.
CEILING:	Drywall painted.	Perf. acoustic tile applied to gypsum board or strapping.
CORE:	Painted drywall on frame wall structure. Inexpensive stairs. Washrooms with vinyl asb. tile. Low cost ceiling tile.	Painted drywall on frame wall structure. Inexpensive stairs. Washrooms with vinyl asb. tile. Low cost ceiling tile.
ELECTRICAL	Incandescent type fixtures or low quality surface mounted fluorescent fixtures.	Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2 watts/sq. ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.

OFFICE BUILDINGS

SECTION 4C PAGE 29
 BASE YEAR 1969
 CONST. CLASS 'D'

D-6	D-7	D-8
Conc. blk. wall below frost line, incl. wpgf. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpgf. & 1" rigid insul to perimeter, Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpgf. & 1" rigid insul to perimeter, Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
Clay face brick veneer with sub sheathing on frame wall structure incl. insulation.	25% Ledge rock veneer. 75% Clay face brick veneer with sub sheathing on frame wall structure and insulation.	50% Ledge rock veneer. 50% Clay face brick veneer with sub sheathing on frame wall structure and insulation.
$\frac{1}{4}$ " Tempered plate. Alum. framed 40%	$\frac{1}{4}$ " Tempered plate. Alum. framed 40%	$\frac{1}{4}$ " Tempered plate. Alum. framed 40%
Good quality wooden joists &/or cols. & beams with T&G decking.	Good quality wooden joists &/or cols. & beams with T&G decking.	Laminated wood decking with cols. and beams.
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	2" Rigid insul. B.U. Roofing. Alum. Flashing.
Vinyl asbestos tile.	Rubber tile.	Avg. quality carpeting.
Drywall painted.	Plaster painted.	Avg. quality plywood panelling.
Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic tile applied to metal susp.	Susp. acoustic metal pans.
Painted drywall on frame wall structure. Inexpensive. Washrooms with vinyl asb. tile. Low cost ceiling tile.	Painted plaster on frame wall structure. Good quality stairs. Washrooms with mosaic tile. Good quality ceiling tile. Ceramic tile dado.	Painted plaster on frame wall structure. Good quality stairs. Washrooms with mosaic tile. Good quality ceiling tile. Ceramic tile dado.
Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2.5 watts/sq. ft.	Good quality troffer type fluorescent fixtures with louvres. 1' x 4' modules. 2.5 watts/sq. ft.	Good quality troffer type fluorescent fixtures with louvres. 1' x 4' modules. 3 watts/sq. ft.
Std. quality fixtures	Good quality fixtures.	Good quality fixtures.

OFFICES

COST FACTORS
FIRST FLOOR RATES
 (BASE 10,000 SQ.FT.- HEIGHT 14'-0")

CONST CLASS 'D'

CLASS COMPONENTS \	4	4½	5	5½	6	6½	7	7½	8
A	7.70	8.80	9.90	10.55	11.25	12.70	14.15	15.05	15.75
B	8.10	9.25	10.40	11.10	11.80	13.35	14.85	15.80	16.55
C	8.45	9.70	10.90	11.65	12.40	14.00	15.55	16.55	17.35

SECOND FLOOR RATES
 (BASE 10,000 SQ FT.- HEIGHT 14'-0")

A	5.75	6.70	7.60	8.15	8.65	9.70	10.70	11.70	12.75
B	6.00	6.95	7.90	8.45	9.00	10.10	11.15	12.15	13.25
C	6.20	7.25	8.20	8.80	9.35	10.45	11.55	12.65	13.75

AREA ADJUSTMENT TABLE

400	600	800	1,000	1,200	1,600	2,000	3,000	4,000
2.00	1.77	1.63	1.54	1.47	1.38	1.31	1.21	1.15
5,000	6,000	7,000	8,000	9,000	10,000	11,000	12,000	14,000
1.10	1.07	1.05	1.03	1.01	1.00	.99	.98	.96

STOREY ADJUSTMENT TABLE

NO.OF STYS.	3	4	5	6
FACTORS	1.01	1.01	1.02	1.02

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

OFFICE BUILDINGS

— LOAD BEARING —

GENERAL COMMENTS

The specifications and rates on pages 32 to 35 inclusive have primarily been designed for smaller type office buildings and offices over stores.

There are four classifications for shape.

<u>SHAPE</u>	<u>LENGTH TO WIDTH RATIO</u>
"A"	Under 1:2
"B"	Between 1:2 and 1:3
"C"	Between 1:3 and 1:4
"D"	Over 1:4

SPECIFICATIONS FOR

CLASS COMPONENTS	C 4	C 5
FOUNDATIONS:	Conc. block walls below frost line, incl. wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Conc. block walls below frost line, incl. wpg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. Conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.
EXTERIOR MASONRY:	Conc. block with stucco finish or ornate conc. block.	Clay facebrick with conc. block back-up & insulation.
GLAZING:	$\frac{1}{4}$ " Tempered Plate Wood framed 20%	$\frac{1}{4}$ " Tempered Plate Steel framed 20%
STRUCTURAL FRAMING:	Wooden joists or beams with T & G decking.	Open web steel joists. Metal decking. Typical span 20'
ROOF FINISH:	1" Rigid insulation. B.U. Roofing. G.I. Flashing.	1" Rigid insulation. B.U. Roofing. G.I. Flashing.
INTERIOR		
FLOORING:	Vinyl asbestos tile.	Vinyl asbestos tile.
WALLS:	Drywall painted.	Drywall painted.
CEILING:	Perf. acoustic tile applied gypsum board or strapping.	Mineral acoustic panels with exposed tee bar suspension.
CORE:	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.

LOAD BEARING BUILDINGS

CONST. CLASS 'C'

C 6	C 7	C 8
Re. conc. wall below frost line, incl. wpgf. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line incl. wpgf. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line incl. wpgf. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Precast conc. units with exposed common aggregate & some clay facebrick with conc. block back-up. Rigid insulation.	Precast conc. units with exposed common aggregate. Rigid insulation.	Random fieldstone with conc. block back-up Rigid insulation.
$\frac{1}{4}$ " Tempered Plate Alum. framed 20%	$\frac{1}{4}$ " Tempered Plate Alum. framed 20%	$\frac{1}{4}$ " Tempered Plate Alum. framed 20%
Open web steel joists. Metal decking. Typical span 25'	Open web steel joists. Metal decking. Typical span 30'	Beams & Girders. Metal decking. Typical span 30'
1 $\frac{1}{2}$ " Rigid insulation. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insulation. B.U. Roofing. G.I. Flashing.	2" Rigid insulation. B.U. Roofing. Alum. Flashing.
Rubber tile. Drywall painted. Mineral acoustic panels with exposed tee bar suspension. Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Rubber tile. Plaster painted. Mineral acoustic tile applied to metal suspension. Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; Finished walls & soffits to stairwell: Precast conc. treads.	Avg. Quality carpeting. Avg. quality plywood panelling. Susp. acoustic metal pans. Painted finished walls. Washrooms with mosaic tile. Good quality ceiling tile; Finished walls & soffits to stairwell: Precast conc. treads.

SPECIFICATIONS FOR

CLASS COMPONENTS	C 4	C 5
ELECTRICAL	Avg. quality 96" 2 tube fluorescent fixtures with louvres. Surface mounted. 2 watts/sq. ft.	Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2 watts/sq. ft.
PLUMBING	Standard quality fixtures.	Standard quality fixtures.

COST FACTORS

FIRST FLOOR RATES

BASE 12' HIGH, 1000 SQ. FT.

CONST. CLASS 'C'

CLASS SHAPE	4	4 1/2	5	5 1/2
A	15.70	16.70	17.65	19.50
B	16.50	17.50	18.50	20.50
C	17.30	18.35	19.40	21.45
D	18.85	20.00	21.15	23.40

SECOND FLOOR RATES

BASE 12' HIGH, 1000 SQ. FT.

CLASS SHAPE	4	4 1/2	5	5 1/2
A	12.50	13.50	14.50	15.85
B	13.10	14.20	15.25	16.65
C	13.75	14.85	15.95	17.45
D	15.00	16.20	17.40	19.00

STOREY ADJUSTMENT TABLE

3	4	5	6
1.02	1.03	1.04	1.05

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

LOAD BEARING BUILDINGS

CONST. CLASS 'C'

C 6	C 7	C 8
Avg. quality troffer type fluorescent fixtures with louvres. 2' x 4' modules. 2.5 watts/sq. ft.	Good quality troffer type fluorescent fixtures with louvres. 1' x 4' modules. 2.5 watts/sq. ft.	Good quality troffer type fluorescent fixtures with louvres. 1' x 4' modules. 3 watts/sq. ft.
Standard quality fixtures.	Good quality fixtures.	Good quality fixtures.

COST FACTORS

FIRST FLOOR RATES

BASE 12' HIGH, 1000 SQ. FT.

CONST. CLASS 'C'

6	6 1/2	7	7 1/2	8	CLASS SHAPE
21.35	23.10	24.85	26.35	27.85	A
22.45	24.30	26.10	27.70	29.25	B
23.50	25.40	27.30	28.95	30.60	C
25.65	27.75	29.80	31.60	33.40	D

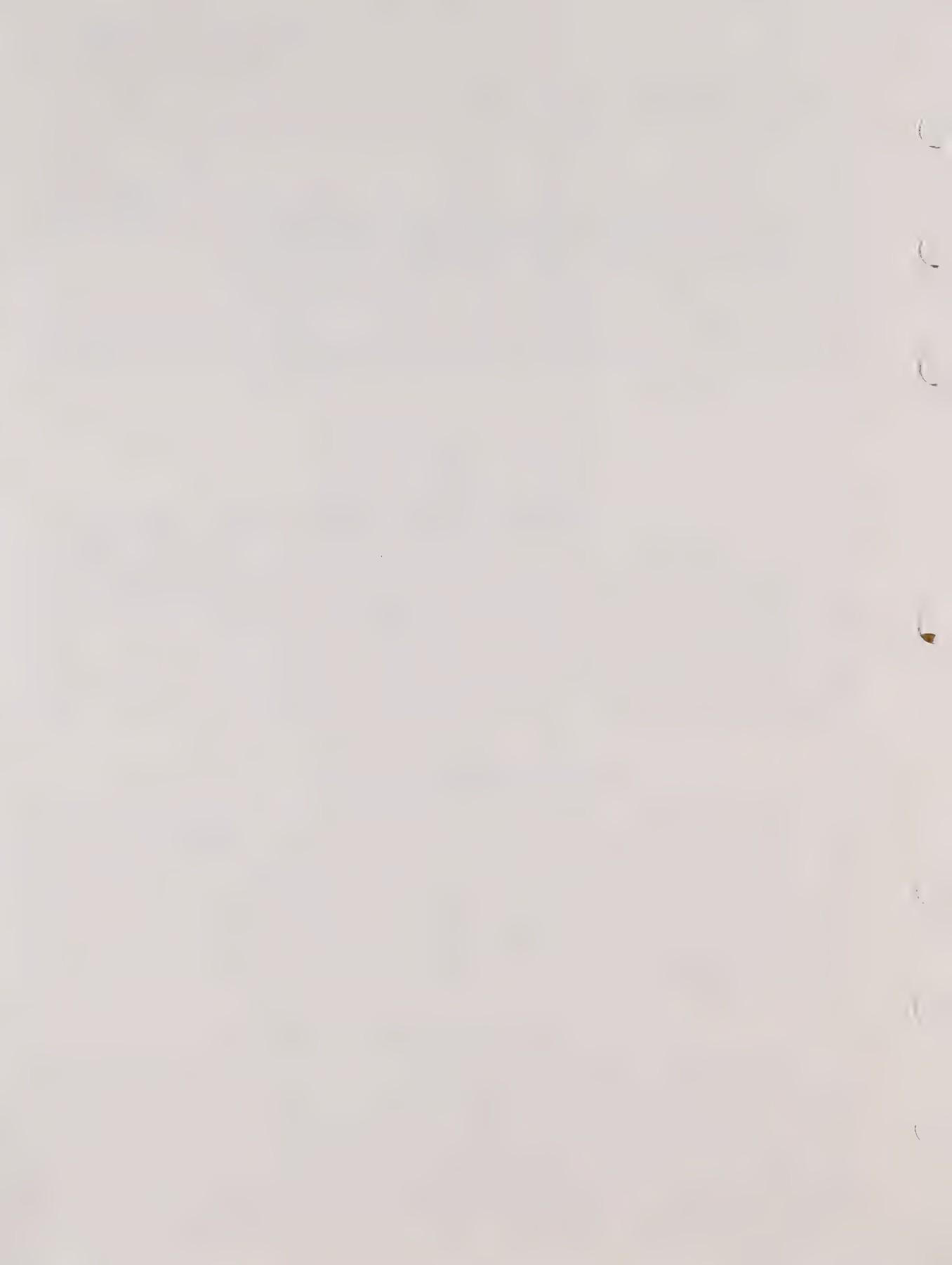
SECOND FLOOR RATES

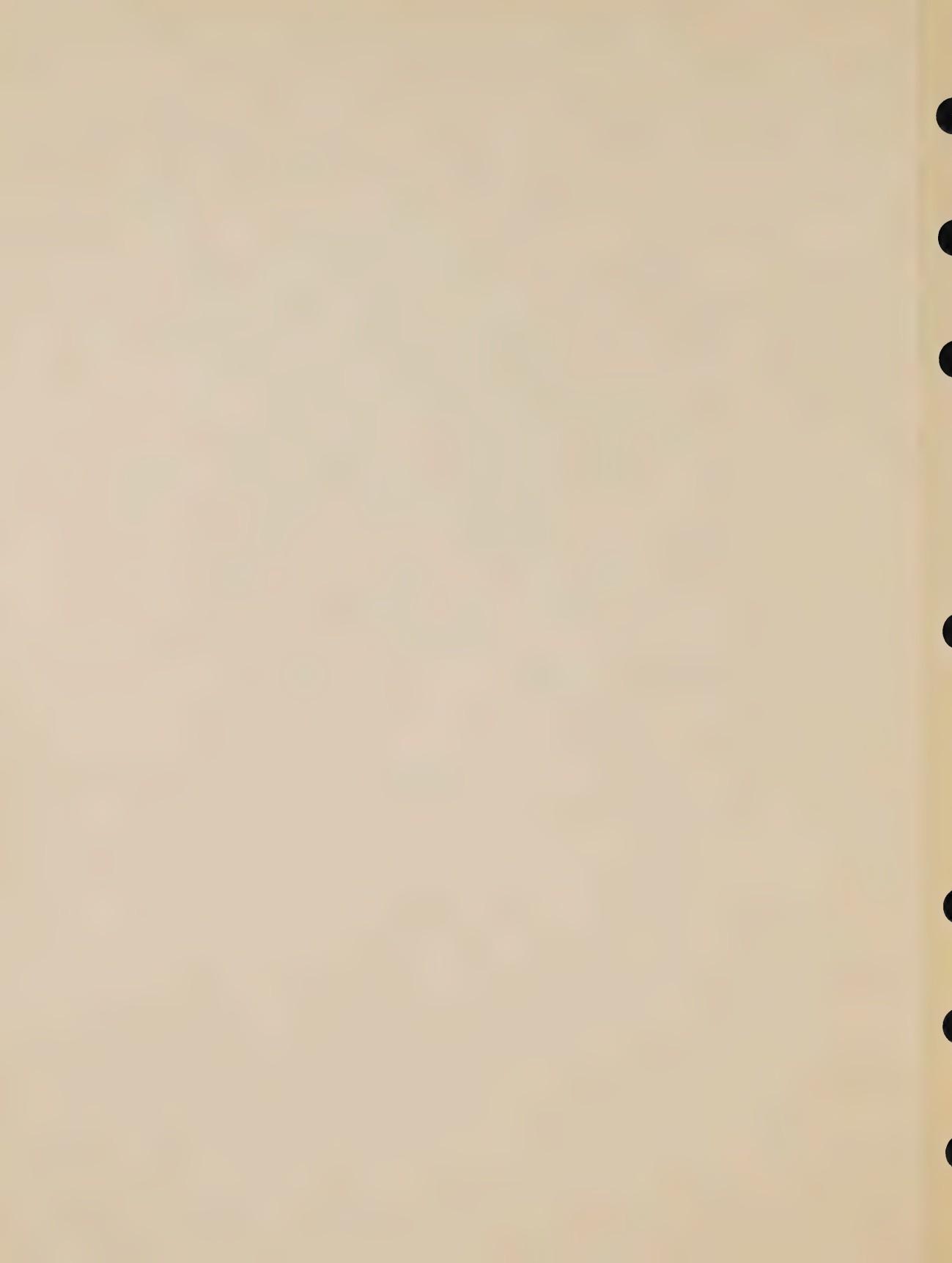
BASE 12' HIGH, 1000 SQ. FT.

6	6 1/2	7	7 1/2	8	CLASS SHAPE
17.15	18.95	20.75	22.15	23.50	A
18.00	19.90	21.80	23.50	24.70	B
18.90	20.90	22.85	24.35	25.85	C
20.60	22.75	24.90	26.55	28.20	D

AREA ADJUSTMENT TABLE

200	250	300	400	500	600	700	800	900
1.62	1.49	1.41	1.29	1.22	1.15	1.10	1.06	1.03
900	1000	1200	1400	1600	1800	2000	2800	3000
1.03	1.00	.96	.93	.90	.88	.86	.80	.79





BANKS

GENERAL COMMENTS

Specifications follow for Construction Class "C" Free Standing type structures. Banks which are an integral part of a Shopping Centre, office building, etc. should be rated with that type of structure.

The cost factors contained in the following tables are predicated on average construction costs for Banks of various quality classes and design. The cost factors include those components shown in the specifications, including normal overhead, profit and architectural fees.

Partitions, vaults and vault doors, night depositories, basements, mezzanines and mechanical system (except plumbing) are considered as additives to the basic cost of the structure.

The specifications and cost factors included in this Section are based on information developed from a base year of 1969.

SPECIFICATIONS FOR

Class Items	C - 4	C - 5	C - 6
FOUNDATIONS:	Con. block walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Con. block walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. con. walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" re. con. slab on compacted fill.	4" re. con. slab on compacted fill.	4" re. con. slab on compacted fill.
EXTERIOR: MASSONRY:	Con. block with stucco finish or ornate con. blk.	Clay facebrick with con. block back-up	Precast con. panels some clay facebrick with con. blk. back-up.
GLAZING:	<p>$\frac{1}{4}$" Temp. plate Alum. framed 20%</p> <p>G.I. Flashing/Coping</p>	<p>$\frac{1}{4}$" Temp. plate Alum. framed 20%</p> <p>G.I. Flashing/Coping</p>	<p>$\frac{1}{4}$" Temp. plate Alum. framed 30%</p> <p>G.I. Flashing/Coping</p>
ROOF:	<p>Wooden joists or beams with T & G. decking.</p> <p>1" Rigid insul. 4 Ply built up roofing.</p>	<p>Open web steel joists Typical Span 20'-25'</p> <p>Med. gauge metal decking;</p> <p>1" Rigid insul. 4 Ply built up roofing.</p>	<p>Open web steel joists Typical Span 25'-30'</p> <p>Med. gauge metal decking;</p> <p>1$\frac{1}{2}$" Rigid insul. 4 Ply built up roofing.</p>
INTERIOR: FLOORING:	Vinyl asbestos tile.	Vinyl asbestos tile.	Vinyl asbestos tile.
WALLS:	Drywall painted.	Drywall painted.	Drywall painted.
CEILINGS:	Perf. acoustic tile applied to gypsum board or strapping.	Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic panels with exposed tee bar suspension.

BANK BUILDINGS

C - 7	C - 8	C - 9	C - 10
Re. con. walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg Code Std. footings	Re. con. walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. con. walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings	Re. con. walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg Code Std. footings
4" re. con. slab on compacted fill.	6" re. con. slab on compacted fill.	6" re. con. slab on compacted fill.	6" re. con. slab on compacted fill.
Fieldstone with con. blk. back-up	Travertine veneer with con. blk. back-up.	Indiana cut limestone with con. block back-up.	Indiana cut limestone with common brick back-up.
Thermobreak insulated plate. Alum. framed 30%.	Thermobreak insulated plate. Alum. framed 40%.	Thermobreak insulated plate. Alum. framed 10%.	Sull type windows Alum. framed 10%.
Alum. Flashing/ Coping.	Alum. Flashing/ Coping.	Copper Flashing/ Coping.	Ornamental friezes and coping. Copper Flashing.
Long span stl joists Typical span 30'-35'	Long span stl joists Typical span 36' +	Long span stl. joists 40' span+, supported by Stl. trusses & cols.	Long span stl. joists 40' span+, supported by stl. trusses & cols.
Med. gauge metal decking;	Med. gauge metal decking;	Heavier ga. metal decking;	Heavier ga. metal decking;
1½" Rigid insul. 5 Ply built up roofing.	2" Rigid insul. 5 Ply built up roofing.	2" Rigid insul. 5 Ply built up roofing.	2" Rigid insul. 5 Ply built up roofing.
Vinyl tile	Avg. quality carpeting.	Multi-coloured terrazzo.	Select quality carpeting.
Plaster painted.	4" Facebrick veneer.	Plaster painted with polished marble dado.	Plaster painted with polished marble embellishments.
¾"Mineral acoustic tile applied to metal suspension.	Susp'd acoustic metal pans.	Suspended metal lath & plaster painted.	Suspended metal lath & ornate plaster. Painted.

SPECIFICATIONS FOR

Class Items	C - 4	C - 5	C - 6
ELECTRICAL:	Bx wiring; Average quality 48" 2 tube fluorescent fixtures Metal or plastic louvres. Surface mounted. Ratio 1:10	Bx or conduit wiring Average quality Troffer type fluorescent fixtures. Metal or plastic louvres. 2' x 4' modules. Ratio 1:8.75	Bx or conduit wiring; Average quality Troffer type fluorescent fixtures. Metal or plastic louvres. 2' x 4' modules. Ratio 1:7.5
PLUMBING:	Standard quality fixtures incl. 2 metal toilet partitions.	Standard quality fixtures incl. 2 metal toilet partitions.	Standard quality fixtures incl. 2 metal toilet partitions.

COST FACTORS
(BASE 3000 SQ. FT. - HEIGHT 14'0")

Class Shape	4	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$
A	14.05	14.95	15.85	16.95	18.05	19.50
B	14.90	15.85	16.80	18.00	19.15	20.65
C	15.60	16.60	17.60	18.85	20.05	21.65
D	16.15	17.20	18.25	19.50	20.75	22.40

COST FACTOR EXCLUSIONS

- | | |
|--------------------------|----------------------------|
| (A) PARTITIONS | (D) BASEMENTS |
| (B) VAULTS & VAULT DOORS | (E) MEZZANINES |
| (C) NIGHT DEPOSITORYES | (F) HEATING & COOL SYSTEMS |

SHAPE CLASSIFICATION

SHAPE	LENGTH TO WIDTH RATIO
"A"	Under 1:2
"B"	Between 1:2 - 1:3
"C"	Between 1:3 - 1:4
"D"	Over 1:4

BANK BUILDINGS

C - 7	C - 8	C - 9	C - 10
Conduit wiring: Average quality 48" 2 tube fluorescent fixtures. Metal or plastic louvres. Surface mounted. Ratio 1:7.5	Conduit wiring: Good quality 48" 2 tube fluorescent fixtures. Metal or plastic louvres. Surface mounted. Ratio 1:6.25	Conduit wiring: Good quality fluorescent fix- tures. Troffer type. 1'x4' units Acrylic Shield. Ratio 1:6.25	Conduit wiring: Good quality fluorescent fix- tures. Troffer type. 2'x2' units Acrylic Shield. Ratio 1:6.25
Good quality fixtures incl. 4 metal toilet partitions.	Good quality fixtures incl. 4 metal toilet partitions.	Good quality fixtures incl. 4 metal toilet partitions.	Good quality fixtures incl. 4 metal toilet partitions.

COST FACTORS
(BASE 3000 SQ.FT.-HEIGHT 14' 0")

7	7½	8	8½	9	9½	10	Class Shape
20.90	22.30	23.65	25.70	27.70	29.50	31.30	A
22.15	23.60	25.05	27.20	29.35	31.30	33.20	B
23.20	24.75	26.25	28.50	30.75	32.75	34.75	C
24.05	25.65	27.20	29.55	31.85	33.95	36.00	D

AREA ADJUSTMENT TABLE

1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000
1.36	1.28	1.21	1.15	1.11	1.08	1.05	1.02	1.00

3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000
1.00	.98	.96	.95	.93	.92	.91	.90	.89

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

BANK ADDITIVES

BASEMENT COST FACTORS
(BASE HEIGHT 10')

Area Shape \	750	1,000	1,500	2,000	2,500	3,000	3,500	4,000
A	5.10	4.80	4.55	4.30	4.10	3.90	3.65	3.50
B	5.40	5.10	4.80	4.55	4.30	4.10	3.90	3.80
C	5.65	5.30	5.00	4.70	4.47	4.25	4.05	3.90

HEIGHT ADJUSTMENT: 7% for each foot of variation in height.

NOTE:

The above square foot costs are related to an unfinished poured concrete structure with concrete floor, minimum lighting, steel stairs and its enclosure.

DEDUCT: 5% if concrete block walls in lieu of poured conc.

NORMAL BASEMENT FINISHES

DESCRIPTION	COST PER SQ. FT.
FLOORS -----	\$.50
CEILING -----	.75
LIGHTING -----	.75

BANK ADDITIVES

BASEMENT COST FACTORS
(BASE HEIGHT 10')

Area Shape	750	1,000	1,500	2,000	2,500	3,000	3,500	4,000
A	5.10	4.60	4.55	4.30	4.10	3.90	3.65	3.50
B	5.40	5.10	4.80	4.55	4.30	4.10	3.90	3.80
C	5.65	5.30	5.00	4.70	4.47	4.25	4.05	3.90
D	5.80	5.45	5.20	4.90	4.65	4.45	4.15	4.00

HEIGHT ADJUSTMENT: 7% for each foot of variation in height.

NOTE:

The above square foot costs are related to an unfinished poured concrete structure with concrete floor, minimum lighting, steel stairs and its enclosure.

DEDUCT: 5% if concrete block walls in lieu of poured conc.

NORMAL BASEMENT FINISHES

DESCRIPTION	COST PER SQ. FT.
FLOORS -----	\$.50
CEILING -----	.75
LIGHTING -----	.75

BANK ADDITIVES

PARTITIONS

SERVICE AREA: This includes washrooms, rest rooms, lunchroom, janitor closet, stationery storage, mechanical and electrical rooms etc. incl. passageways.

To determine correct linear foot to floor area ratio calculate only the areas named above.

Where service areas are located in the basement ADD for the floor and ceiling finishes.

PARTITION COST FACTORS

(BASE HT. 10'-0")

Type \ Ratio	1:4	1:6	1:8	1:10
Painted Drywall 2 sides on wood framing.	4.20	2.80	2.10	1.70
Painted concrete block.	4.60	3.10	2.30	1.90
Painted Plaster and Lath on wood framing.	5.80	3.90	2.90	2.30

HEIGHT ADJUSTMENT: Allow for 10% for each foot of height variation.

NOTE:

The above cost factors take into consideration the usual number of doors required for bank type structures.

Metal framed office partitions to the Manager's, Accountant's and Conference Room areas rate at \$50.00 per linear foot.

BANK ADDITIVES

FIREPROOF STORAGE VAULT COST FACTORS (BASE INTERIOR HT. 8'-6")

AREA	100	120	140	160	180	200	220	240	260	280
RATE	7.60	7.25	6.90	6.65	6.45	6.25	6.10	5.95	5.80	5.65
AREA	280	300	320	340	360	380	400	420	440	460
RATE	5.65	5.55	5.45	5.35	5.25	5.15	5.10	5.05	5.00	4.95

HEIGHT ADJUSTMENT: 10% for each foot of variation in ht. calculated on interior dimensions.

FIREPROOF STORAGE TYPE - Usually built under the treasury vault. Averaged reinforced concrete wall thickness. Fireproof vault doors to be considered as an additive.

Vault floor areas calculated on exterior dimensions.

NORMAL VAULT INTERIOR FINISHES

DESCRIPTION	COST PER SQ.FT.
FLOORS -----	\$.30
WALLS -----	1.20
CEILINGS -----	.40

VAULT DOORS - EXTRA

DESCRIPTION	FIRE DURATION RATING	
	2-HOURS	4-HOURS
Single Door 32" x 78" (Installed cost)	600	950

NIGHT DEPOSITORIES

DESCRIPTION	COST PER UNIT INSTAL'D
Std. Rectangular Door Type Depository with envelope flap above.	\$4,300
Depository and Envelope Units side by side.	\$4,900
Side by Side Unit with Clearing Safe above.	\$5,500

NOTE: As the circular door type are fast becoming obsolete use the above rates and depreciate accordingly.

BANK ADDITIVES

TREASURY VAULT COST FACTORS (BASE INTERIOR HT. 8'-0")

AREA	100	120	140	160	180	200	220	240	260	280
RATE	36.30	34.30	32.60	31.40	30.30	29.30	28.45	27.70	27.00	26.40
AREA	280	300	320	340	360	380	400	420	440	460
RATE	26.40	25.85	25.30	24.85	24.40	24.00	23.65	23.30	22.95	22.60

HEIGHT ADJUSTMENT: Add 3% per foot over base ht. calculated on interior dimension.

TREASURY TYPE - 18" thick reinforced concrete walls.

DOORS - Vault doors to be considered as an additive.

SIZE - Vault Floor Areas calculated on exterior dimensions.

GENERAL COMMENTS

The above rates reflect the general trend to modern vault construction and are designed for doors 3½" - 7" thick. Where doors are found to be greater than 7" thick regulations require that more reinforcing be utilized and/or wall thickness increased. To compensate for this higher class vault ADD 10% to above rates.
DO NOT ADD for any steel lining.

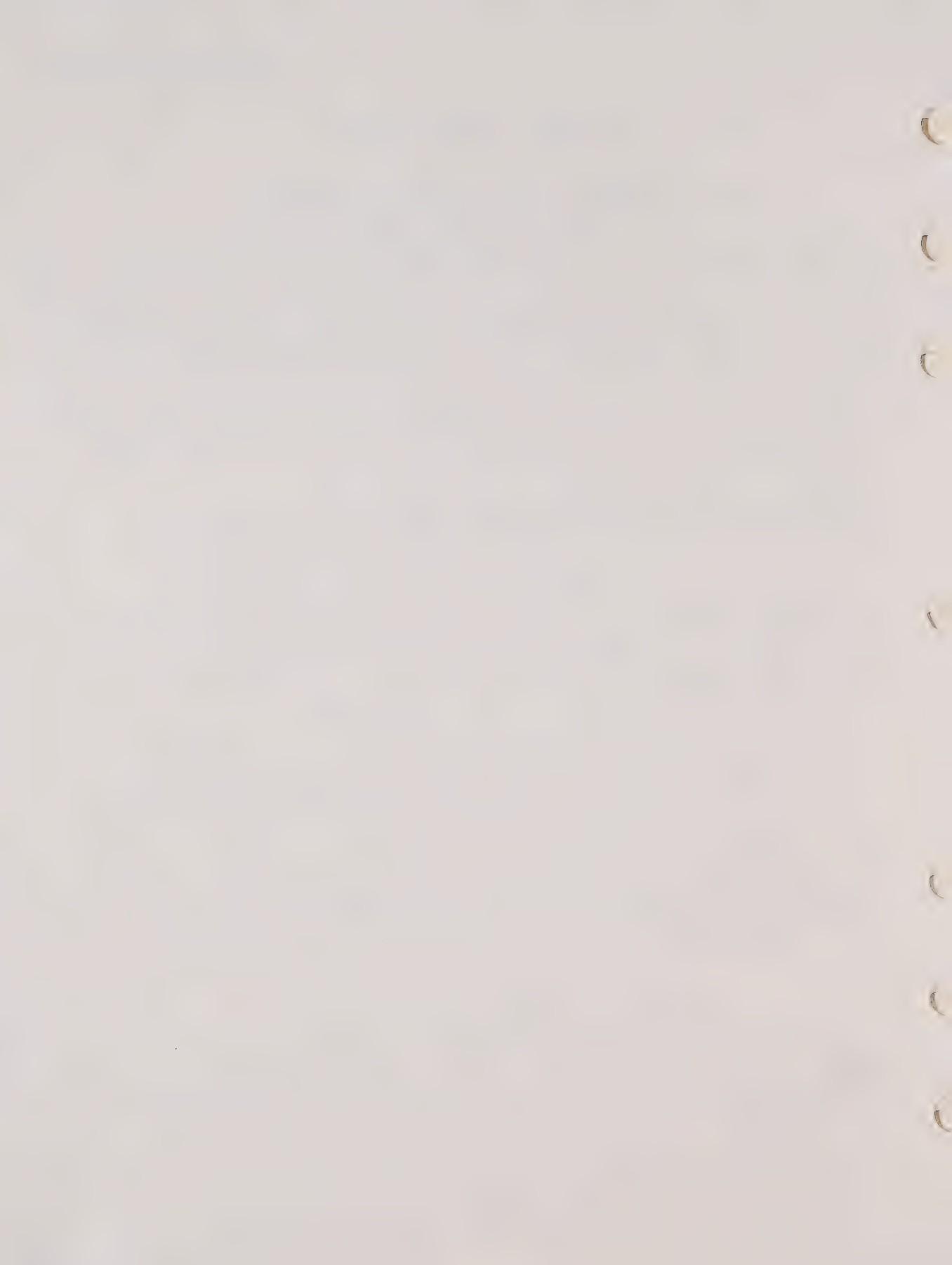
VAULT DOORS - EXTRA

SIZE	THICKNESS	COST PER DOOR		
		PAINTED	STAINLESS	STEEL
STANDARD	3½"	4,600		6,600
STANDARD	7"	10,700		12,700
STANDARD	10"	15,500		17,500

NOTE: Covering for Time Lock Mechanism NOT TO BE included in determining door thickness.

NORMAL INTERIOR FINISHES - EXTRA

DESCRIPTION	COST PER SQ. FT.
FLOORS -----	\$.30
WALLS -----	1.20
CEILINGS -----	.40





HOTELS - MOTOR HOTELS - MOTELS

GENERAL COMMENTS

This section has been divided into two parts: a) Hotels & Motor Hotels, b) Motels. For the further information on Motels consult pages 23 - 29 inclusive.

Hotel & Motor Hotel structures are usually comprised of two main sections - Rental & Commercial. Specifications follow for three basic Construction Class A, B & C for the Rental Section and Construction Class C for the Commercial Section.

The cost factors contained in the following tables are predicated on average construction costs for Hotels & Motor Hotels of various quality classes and design. The cost factors include those components shown in the Specifications including normal overhead, profit, engineering and architectural fees.

In the Rental Section the rates have been based on an average suite area of 300 square feet. Where the average suite size is more than 300 square feet deduct 3% per 100 square feet difference. Conversely add 3% per 100 square feet difference where the average suite size is less than 300 square feet.

In the Commercial Section all partitions, except for the normal allowance for washrooms, should be considered as additives.

Elevators, escalators, mechanical systems (except plumbing), basements, garages, penthouses, etc. are considered as additives to the basic cost of the structure for both the Rental and Commercial Sections.

The specifications and cost factors included in this Section are based on information developed from a base year of 1969.

CLASS COMPONENTS	4	5	6
FOUNDATION:	Re. conc. or masonry walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. or masonry walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR WALLS: MASONRY:	Painted ledge block incl. insulation.	Clay facebrick with conc. block back-up & insulation.	Clay facebrick & some random fieldstone, conc. block back-up & insulation.
GLAZING:	½" Tempered plate. Wood framed 40%.	½" Tempered plate. Steel framed 40%.	½" Tempered plate. Alum. framed 40%.
ROOF FINISH:	1" Rigid insul. B.U. Roofing. G.I. Flashing.	1" Rigid insul. B.U. Roofing. G.I. Flashing.	1½" Rigid insul. B.U. Roofing. G.I. Flashing.
INT. FINISHES: SERVICE AREA: FLOORING:	Avg. quality vinyl asbestos tile.	Good quality vinyl asbestos tile.	Good quality vinyl asbestos tile. Corridors, low cost carpeting.
WALLS:	Painted drywall.	Painted drywall.	Painted drywall.
PARTITIONS:	Metal studs.	Metal studs.	Metal studs.
CEILING:	Perf. acoustic tile.	Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic panels with exposed tee bar suspension.
SUITES: FLOORING:	Avg. quality vinyl asbestos tile.	Good quality vinyl asbestos tile.	Low cost carpeting.
WALLS:	Painted masonry.	Painted drywall.	Painted drywall.
CEILING:	Painted drywall.	Painted drywall.	Textured plaster.
WASHROOMS:	Finishes similar to above.	Finishes similar to above. Glazed hard-board dado.	Ceramic tile dado & mosaic tile flooring. Small vanity.
ELECTRICAL:	Avg. quality fixtures Adequate number of outlets.	Avg. quality fixtures. Average number of outlets.	Good quality fixtures. incl. some fluorescents Avg. number of outlets.
PLUMBING:	Economy quality fixtures.	Standard quality fixtures.	Standard quality fixtures.

HOTELS 8 MOTOR HOTELS

SECTION

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BASE YEAR 1969

7	8	9	10
Re. conc. wall below frost line, wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, wpfg. & 1" rigid insul. to perimeter. Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Precast conc. units with exposed common aggregate. Rigid insulation.	Random fieldstone, conc. block back-up. Rigid insulation.	Cut limestone with conc. block back-up. Rigid insulation.	Polished granite with brick back-up. Rigid insulation.
$\frac{1}{4}$ " Tempered plate. Alum. framed 40%.	Thermobreak insulated plate. Alum. framed 40%.	Thermobreak insulated plate. Alum. framed 40%.	Thermobreak insulated plate. Alum. framed 40%.
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	2" Rigid insul. B.U. Roofing. Alum. Flashing.	2" Rigid insul. B.U. Roofing. Copper Flashing.	2" Rigid insul. B.U. Roofing. Copper Flashing.
Avg. quality carpeting.	Avg. quality carpeting.	Good quality carpeting.	Select quality carpeting.
Painted plaster.	Painted plaster.	Vinyl covered.	Vinyl covered.
Conc. block.	Conc. block.	Conc. block.	Conc. block.
Mineral acoustic tile applied to metal suspension.	Mineral acoustic tile applied to metal suspension.	Susp. metal lath & acoustical plaster.	Susp. metal lath & acoustical plaster.
Avg. quality carpeting.	Avg. quality carpeting.	Good quality carpeting.	Select quality carpeting.
Painted plaster.	Painted plaster.	Vinyl covered.	Vinyl covered.
Textured plaster.	Susp. lath & plaster painted.	Susp. metal lath & acoustical plaster.	Susp. metal lath & acoustical plaster.
Ceramic tile dado & flooring. Avg. size vanity. Standard shower doors.	Ceramic tile dado & flooring. Avg. size vanity. Standard shower doors.	Ceramic tile to walls & floor. Large vanity Custom shower doors.	Ceramic tile to walls & floor. Large vanity Custom shower doors.
Good quality fixtures. incl. some fluorescents. Avg. number of outlets.	Good quality fixtures. incl. some fluorescents. Numerous outlets.	Select quality fixtures. incl. some fluorescents. Numerous outlets.	Select quality fixtures. incl. some fluorescents. Numerous outlets.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.	Select quality fixtures.

S P E C I F I C A T I O N S F O R
R E N T A L

CLASS COMPONENTS	A 4	A 5	A 6
STRUCTURAL FRAMING:	Open web steel joists. Medium gauge metal decking. Fireproofed.	Open web steel joists. Medium gauge metal decking. Fireproofed.	Open web steel joists. Medium gauge metal decking. Fireproofed.
TYPICAL BAYS:	15' x 15'	20' x 20'	20' x 25'

C O S T F A C T O R S

CONST. CLASS 'A'

(BASE 10,000 SQ.FT.-HEIGHT 9'-0")

CLASS STOREY	4	4 1/2	5	5 1/2	6	6 1/2
1st FLOOR	13.20	14.05	14.90	15.65	16.45	17.65
2nd FLOOR	10.90	11.75	12.60	13.20	13.80	14.95

STOREY ADJUSTMENT TABLE

3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.01	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.05	1.06	1.07	1.08	1.09	1.09
17	18	19	20	21	22	23	24	25	26	27	28	29	30
1.10	1.11	1.12	1.13	1.14	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

HOTELS 8 MOTOR HOTELS

SECTION

CONST. CLASS 'A'

A 7	A 8	A 9	A 10
Open web steel joists. Medium gauge metal decking. Fireproofed.	Beams & girders. Medium gauge metal decking. Fireproofed.	Beams & girders. Medium gauge metal decking. Fireproofed.	Beams & girders. Medium gauge metal decking. Fireproofed.
20' x 30'	20' x 30'	30' x 30'	30' x 40'

COST FACTORS
(BASE 10,000 SQ.FT. - HEIGHT 9'-0")

CONST. CLASS 'A'

7	7 1/2	8	8 1/2	9	9 1/2	10	CLASS STOREY
18.85	19.55	20.30	22.10	23.90	25.10	26.30	1st FLOOR
16.10	16.75	17.40	19.25	21.10	22.20	23.30	2nd FLOOR

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000
1.23	1.16	1.11	1.08	1.06	1.04	1.02	1.01	1.00	.99
11,000	12,000	14,000	16,000	18,000	24,000	30,000	40,000	60,000	80,000
.99	.98	.97	.96	.95	.93	.92	.91	.89	.88

SPECIFICATIONS FOR
RENTAL

CLASS COMPONENTS	B 4	B 5	B 6
STRUCTURAL FRAMING:	Re. con. flat slab with drop panels.	Re. con. flat slab with drop panels.	Re. con. flat plate.
TYPICAL BAYS:	15' x 15'	20' x 20'	20' x 25'

COST FACTORS

CONST. CLASS 'B' (BASE 10,000 SQ. FT. - HEIGHT 9'-0")

CLASS STOREY	4	4 1/2	5	5 1/2	6	6 1/2
1st FLOOR	12.70	13.60	14.50	15.25	15.95	17.10
2nd FLOOR	10.20	11.10	12.00	12.60	13.20	14.35

STOREY ADJUSTMENT TABLE

3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.01	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.05	1.06	1.07	1.08	1.09	1.09
17	18	19	20	21	22	23	24	25	26	27	28	29	30
1.10	1.11	1.12	1.13	1.14	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

HOTELS 8 MOTOR HOTELS

SECTION

CONST. CLASS 'B'

B 7	B 8	B 9	B 10
Re. con. one way solid slab incl. beams.	Re. con. two way solid slab incl. beams.	Re. con. two way joists (waffle flat slab) dome formed.	Re. con. one way joists (waffle flat slab) long pan formed.
20' x 30'	20' x 30'	30' x 30'	30' x 40'

COST FACTORS

(BASE 10,000 SQ. FT. - HEIGHT 9'-0")

CONST. CLASS 'B'

7	7 1/2	8	8 1/2	9	9 1/2	10	CLASS STOREY
18.25	18.95	19.70	21.25	22.80	23.65	24.50	1st FLOOR
15.50	16.15	16.80	18.30	19.80	20.60	21.35	2nd FLOOR

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000
1.23	1.16	1.11	1.08	1.06	1.04	1.02	1.01	1.00	.99
11,000	12,000	14,000	16,000	18,000	24,000	30,000	40,000	60,000	80,000
.99	.98	.97	.96	.95	.93	.92	.91	.89	.88

S P E C I F I C A T I O N S F O R
R E N T A L

CLASS COMPONENTS	C 4	C 5	C 6
STRUCTURAL FRAMING:	Wooden joists or beams with decking.	Open web steel joists. Metal decking.	Open web steel joists. Metal decking.
TYPICAL SPAN:	15'	20'	25'

C O S T F A C T O R S
CONST. CLASS 'C' (BASE 10,000 SQ. FT.—HEIGHT 9'-0")

CLASS STOREY	4	4 1/2	5	5 1/2	6	6 1/2
1st FLOOR	10.55	11.50	12.50	13.30	14.15	15.30
2nd FLOOR	8.50	9.55	10.55	11.15	11.75	12.90

S T O R E Y A D J U S T M E N T T A B L E

3	4	5	6	7	8	9	10
1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

NOTE: The above rates are based on an average suite size of 300 sq. ft.

An adjustment of 3% should be made for every 100 sq. ft. of variation in area.

HOTELS & MOTOR HOTELS

SECTION

CONST. CLASS 'C'

C 7	C 8	C 9	C 10
Open web steel joists. Metal decking.	Long span steel joists. Metal decking.	Long span steel joists. Metal decking.	Long span steel joists. Metal decking.
30'	35'	45'	50'

COST FACTORS

(BASE 10,000 SQ.FT. - HEIGHT 9'-0")

CONST. CLASS 'C'

7	7 1/2	8	8 1/2	9	9 1/2	10	CLASS STOREY
16.45	17.15	17.90	19.40	20.90	21.55	22.20	1st FLOOR
14.05	14.65	15.25	16.70	18.10	18.80	19.45	2nd FLOOR

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000
1.27	1.18	1.13	1.09	1.06	1.04	1.02	1.01	1.00	.99
11,000	12,000	14,000	16,000	20,000	24,000	30,000	36,000	46,000	60,000
.99	.98	.97	.95	.93	.92	.91	.90	.89	.87

SPECIFICATIONS FOR
COMMERCIAL

CLASS COMPONENTS	C 4	C 5	C 6
FOUNDATIONS:	Conc. block walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.	Conc. block walls below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR MASONRY:	Painted ledge block incl. insulation.	Clay facebrick with conc. block back-up & insulation.	Clay face brick & some random fieldstone. Conc. block back-up & insulation.
GLAZING:	$\frac{1}{4}$ " Tempered Plate Wood framed 20%.	$\frac{1}{4}$ " Tempered Plate Steel framed 20%.	$\frac{1}{4}$ " Tempered Plate Alum. framed 20%.
STRUCTURAL FRAMING:	Wood joists or beams & T & G decking.	Open web steel joists Metal decking.	Open web steel joists Metal decking.
TYPICAL BAYS:	15' x 15'	20' x 20'	20' x 25'
ROOF FINISH:	1" Rigid insul. B.U. Roofing G.I. Flashing	1" Rigid insul. B.U. Roofing G.I. Flashing	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing G.I. Flashing
INTERIOR FINISHES:			
FLOORING:	Average quality Vinyl Asbestos tile.	Good quality vinyl asbestos tile.	Low cost carpeting.
WALLS:	Drywall painted.	Drywall painted.	Drywall painted.
CEILING:	Perf. acoustic tile applied to gypsum board or strapping.	Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic panels with exposed tee bar suspension.
WASHROOMS:	Painted conc. block. Avg. quality vinyl asbestos floor tile Low cost ceiling tile.	Painted drywall with glazed hardboard dado. Good quality V.A. floor tile. Good quality ceiling tile.	Painted plaster walls with ceramic tile dado Mosaic floor tile. Susp. lath & plaster ceiling.

HOTELS 8 MOTOR HOTELS

SECTION

CONST. CLASS 'C'

C 7	C 8	C 9	C 10
Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footing.	Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpfg. & 1" rigid insul. to perimeter; Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Precast conc. units with exposed common aggregate, Rigid insulation.	Random fieldstone conc. block back-up. Rigid insulation.	Cut limestone with conc. block back-up. Rigid insulation.	Polished granite with brick back-up Rigid insulation.
$\frac{1}{4}$ " Tempered Plate Alum. framed 20%.	Thermobreak insulated plate. Alum. framed 20%.	Thermobreak insulated plate. Alum. framed 20%.	Thermobreak insulated plate. Alum. framed 20%.
Open web steel joists. Metal decking.	Beams & girders Metal decking.	Beams & girders Metal decking.	Beams & Girders Metal decking.
20' x 30'	20' x 30'	30' x 30'	30' x 40'
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing G.I. Flashing	2" Rigid insul. B.U. Roofing Alum. Flashing	2" Rigid insul. B.U. Roofing Copper Flashing	2" Rigid insul. B.U. Roofing Copper Flashing
Average quality carpeting.	Average quality carpeting.	Good quality carpeting.	Select quality carpeting.
Plaster painted.	Average quality plywood panelling.	Plastic laminate panelling.	Matched wood panelling.
Mineral acoustic tile applied to metal suspension.	Susp. lath & plaster.	Susp. metal lath & acoustical plaster.	Susp. Acrylic panels.
Painted plaster walls with ceramic tile dado. Mosaic floor tile. Susp. lath & plaster ceiling.	Ceramic tile walls. Quarry tile to floor. Acoustic plaster to ceiling.	Ceramic tile walls. Quarry tile to floor. Acoustic plaster to ceiling.	Ceramic tile walls. Quarry tile to floor. Acoustic plaster to ceiling.

COMMERCIAL

CLASS COMPONENTS	C 4	C 5	C 6
ELECTRICAL:	Avg. quality incandescent fixtures.	Avg. quality incandescent fixtures.	Good quality incandescent; some fluorescent fixtures.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Good quality fixtures.

COST FACTORS

FIRST FLOOR RATES
(BASE 20,000 SQ.FT.-HEIGHT 14'-0")

CLASS SHAPE	4	4 1/2	5	5 1/2	6	6 1/2
A	9.30	10.45	11.60	12.65	13.70	14.65
B	9.60	10.75	11.95	13.05	14.10	15.10
C	9.95	11.20	12.40	13.55	14.65	15.70

SECOND FLOOR RATES

(BASE 20,000 SQ.FT. HEIGHT 14'-0")

A	7.00	8.20	9.40	10.15	10.90	11.90
B	7.20	8.45	9.70	10.45	11.25	12.25
C	7.50	8.75	10.05	10.85	11.65	12.75

STOREY ADJUSTMENT TABLE

3	4	5	6	7	8	9	10
1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

HOTELS 8 MOTOR HOTELS

SECTION 6C PAGE 13
BASE YEAR 1969

SECTION

CONST. CLASS 'C'

C 7	C 8	C 9	C 10
Good quality fluorescent fixtures.	Good quality fixtures and some custom incandescent fixtures.	Custom quality incandescent fixtures with recessed fluorescent fixtures.	Custom quality incandescent fixtures incl. chandeliers, spotlights & concealed fluorescents.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.	Custom quality fixtures.

COST FACTORS

FIRST FLOOR RATES

(BASE 20,000 SQ.FT. - HEIGHT 14'-0")

7	7 1/2	8	8 1/2	9	9 1/2	10	CLASS SHAPE
15.60	16.60	17.60	19.05	20.45	22.80	25.15	A
16.05	17.10	18.15	19.60	21.05	23.50	25.90	B
16.70	17.75	18.85	20.40	21.90	24.40	26.90	C

SECOND FLOOR RATES

(BASE 20,000 SQ.FT. - HEIGHT 14'-0")

12.85	13.80	14.75	16.25	17.75	20.00	22.20	A
13.25	14.20	15.20	16.75	18.30	20.60	22.85	B
13.75	14.75	15.80	17.40	19.00	21.40	23.75	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	7,000	9,000	10,000	14,000	16,000	18,000
1.57	1.42	1.32	1.26	1.18	1.13	1.11	1.05	1.03	1.01
18,000	20,000	24,000	30,000	36,000	40,000	50,000	60,000	80,000	100,000
1.01	1.00	.98	.95	.93	.92	.90	.89	.87	.86

BASEMENT - CLASS 'B'

DESCRIPTION: The following sq. ft. cost factors are related to an unfinished re. conc. structures with conc. fl. (6" thick or more), min. lighting and drainage.

COST FACTORS

(BASE 10,000 SQ.FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-Basement)	3RD LEVEL (Sub-Sub-Basement)
"A"	6.50	7.10	6.65
"B"	6.75	7.35	6.85
"C"	6.95	7.55	7.05

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.16	1.13	1.11	1.09	1.07	1.05	1.02	1.00
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
1.00	.98	.96	.94	.91	.88	.86	.84

BASEMENT - CLASS 'C'

DESCRIPTION: The following sq. ft. cost factors are related to steel structures with conc. fl. (6" thick or more), min. lighting and drainage.

COST FACTORS

(BASE 10,000 SQ.FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-Basement)	3RD LEVEL (Sub-Sub-Basement)
"A"	5.70	6.30	5.85
"B"	5.95	6.55	6.05
"C"	6.15	6.75	6.25

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.25	1.16	1.12	1.09	1.07	1.05	1.02	1.00
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
1.00	.98	.95	.93	.89	.87	.83	.81

ADJUSTMENTS: 10% for each foot of wall height variation.

Conc. susp. slab on metal pan deduct 70¢ per S.F.

Steel Struct. concrete fire proofed Add 0.75 per S.F.

Steel Struct. Fireproofed with sprayed asbestos Add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

HOTELS 8 MOTOR HOTELS

FINISHED BASEMENT SPECIFICATIONS

— ADDITIVE TO UNFINISHED BASEMENTS —

<u>TYPE COMPONENTS</u>	I	II	III
FLOOR FINISHES:	Vinyl Asbestos Tile.	Terrazzo Tile.	Quarry Tile.
WALL FINISHES:	Painted walls and columns.	Painted plaster walls incl. furred columns.	Vinyl covered finished walls incl. furred cols.
CEILING FINISHES:	Fiberglas panels with Tee Bar Susp.	Mineral acoustic with Tee Bar Susp.	Susp. Mineral acoustic Tile.
ELECTRICAL:	Avg. quality 48" 2-tube Fluorescent Fixtures. Surface mounted 2 Watts/sq. ft.	Avg. quality 1' x 4' Troffer Fluorescent Fixtures. 2 Watts/sq. ft.	Good quality 1' x 4' Troffer Fluorescent Fixtures. 2 Watts/sq. ft.
PLUMBING:	Standard quality Fixtures.	Standard quality Fixtures.	Good quality Fixtures.

COST FACTORS
(BASE INTERIOR HEIGHT 9'-0")

<u>AREA TYPE</u>	1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
I	3.15	3.05	3.00	2.95	2.95	2.90	2.90	2.85
II	5.10	4.95	4.75	4.60	4.50	4.45	4.30	4.20
III	6.85	6.70	6.50	6.35	6.25	6.15	6.00	5.95

<u>AREA TYPE</u>	10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
I	2.85	2.85	2.80	2.75	2.70	2.65	2.60	2.55
II	4.20	4.15	4.00	3.90	3.75	3.65	3.40	3.15
III	5.95	5.85	5.70	5.65	5.45	5.35	5.10	4.90

HEIGHT ADJUSTMENT: 1% for each foot of variation in height.

HOTELS & MOTOR HOTELS

PARKING GARAGES-CLASS 'B'

DESCRIPTION:- The following square foot cost factors are related to an unfinished reinf. concrete structures with concrete floor (6" thick or more), minimum lighting and drainage.

COST FACTORS
(BASE 60,000 SQ. FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	5.60	6.15	5.75
"B"	5.85	6.35	5.90
"C"	6.00	6.55	6.10

AREA ADJUSTMENT TABLE

8,000	12,000	16,000	20,000	30,000	40,000	50,000
1.18	1.14	1.11	1.09	1.06	1.03	1.01
60,000	70,000	80,000	90,000	100,000	120,000	140,000
1.00	.99	.98	.97	.96	.95	.94

EXTENDED BASEMENT PARKING

COST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	7.60	6.15	5.75
"B"	8.25	6.35	5.90
"C"	8.10	6.55	6.10

ADJUSTMENTS: 10% for each foot of wall height variation.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

HOTELS 8 MOTOR HOTELS

PARKING GARAGES - CLASS 'C'

DESCRIPTION:- The following square foot cost factors are related to steel structures with concrete floors (6" thick or more), minimum lighting and drainage.

COST FACTORS

(BASE 60,000 SQ. FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	4.75	5.25	4.85
"B"	4.95	5.45	5.05
"C"	5.10	5.60	5.20

AREA ADJUSTMENT TABLE

8,000	12,000	16,000	20,000	30,000	40,000	50,000
1.22	1.17	1.14	1.11	1.07	1.04	1.02
60,000	70,000	80,000	90,000	100,000	120,000	140,000
1.00	.98	.97	.96	.95	.93	.92

EXTENDED BASEMENT PARKING
COST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	6.80	5.25	4.85
"B"	7.45	5.45	5.05
"C"	7.30	5.60	5.20

ADJUSTMENTS: 10% for each foot of wall variation. Conc. susp. slab on metal pan deduct 70¢ per S.F. Steel Struct. concrete fire proofed add 0.75¢ per S.F. Steel Struct. fireproofed with sprayed asbestos add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
I	CLAY TILE - Painted.				
	LOW COST PLYWOOD - Painted or prefinished, wood framed.				
	LOW COST PLYWOOD PARTIALLY GLAZED - Painted or prefinished, Wood framed.				
	HARDBOARD - Prefinished on wooden studs.	\$3.00	\$1.50	\$1.05	\$0.75
II	PLASTER ON LATH - Painted, wood or metal studs				
	SOLID PLASTER - Painted, furred.				
	CONCRETE BLOCK - Painted, incl.				
	DECOR BLOCK, SHADOW BLOCK - etc.				
	DRYWALL - Painted, or wooden studs.	4.00	2.00	1.35	1.00
III	PLASTER - Painted, on clay tile.				
	GLAZED - Conc. block or tile.				
	DRYWALL, VINYL COVERED - Wood or metal studs.				
	DRYWALL PANELS - Painted, movable; metal frame				
	DRYWALL PANELS PARTIALLY GLAZED - Painted, movable, metal framed.				
	DRYWALL, VINYL COVERED - Movable, metal framed	5.00	2.50	1.65	1.25

HEIGHT ADJUSTMENT: Allow 10% foot of height variation.

Ratios are based on the proportion of one linear foot of partitioning to the net square footage of floor area.

The above cost factors take into consideration the usual number of doors required for average office installation.

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
IV	GOOD QUALITY PLYWOOD, PARTIALLY GLAZED - Rubbed or prefinished, wood or metal studs.				
	DRYWALL - VINYL COVERED, PARTIALLY GLAZED - Movable, metal framed.				
	ACCORDIAN TYPE, VINYL FABRIC - Wood or steel framed.				
	SELECT QUALITY WOOD PANELLING - Rubbed or prefinished, wood or metal studs.				
	PLASTER - Painted, on conc. block.				
V	GOOD QUALITY PLYWOOD - Rubbed or prefinished, wood or metal studs.	\$6.00	\$3.00	\$2.00	\$1.50
	FULLY GLAZED - Movable, metal framed.				
	METAL PANELS, PARTIALLY GLAZED - Painted, movable, metal framed.				
VI	METAL PANELS - Painted, movable, metal framed.	7.00	3.50	2.35	1.75
	PLASTIC LAMINATE PANELS - Wood or metal studs.				
	PLASTIC LAMINATE PANELS - Movable, metal framed.				
VII	PLASTIC LAMINATE PANELS, PARTIALLY GLAZED - Movable, metal framed.	9.20	4.60	3.10	2.30
	EXTRUDED ALUM. FRAMED & PLATE GLASS - (Clear, patterned, or Georgian wire)	12.00	6.00	4.00	3.00
MISC.	POLISHED MARBLE OR GRANITE With masonry back-up.	24.00	12.00	8.00	6.00

ADDITIVES

PASSENGER ELEVATORS

SELECTIVE COLLECTIVE

SPEED (FT. PER MIN.)	CAPACITY		ADDITIONAL COST PER STOP
	1500 lbs.	2000 lbs.	
100	\$11,750	\$12,250	+ \$1350
150	\$14,500	\$15,000	+ \$1600

FULLY AUTOMATIC

SPEED (FT. PER MIN.)	CAPACITY				ADDITIONAL COST PER STOP INCL. POWER DRS.
	2500 lbs.	3000 lbs.	3500 lbs.	4000 lbs.	
200	\$ 25,000	\$ 27,000	\$ 29,000	\$ 31,000	+ \$1600
300	33,000	35,000	36,500	38,000	+ 1650
350	36,000	38,000	40,000	42,000	+ 1700
400	41,000	43,000	45,000	47,000	+ 1800
500	50,000	52,000	53,500	55,000	+ 2000
600	59,000	62,000	65,000	68,000	+ 2000
700	69,000	72,000	75,000	78,000	+ 2100
800	80,000	83,000	86,000	89,000	+ 2200
1000	98,000	101,000	104,000	107,000	+ 2200
1200	118,000	122,000	126,000	130,000	+ 2300

NOTE: To compute the cost of passenger elevators, the base cost is determined by the capacity and speed. To arrive at a total cost, the suggested cost per stop, multiplied by the number of stops must be added to the base cost. For those floors which are bypassed by an express elevator apply a bypass cost of \$650. per floor.

ESCALATORS

24" Width .. Per foot Lift \$2000 -- \$2500

32" Width .. Per foot Lift 2500 -- 3000

48" Width .. Per foot Lift 3000 -- 4000

ADDITIVES

FREIGHT ELEVATORS

To compute the cost of freight elevators, the base cost per shaft is determined by the capacity and speed of the unit. In addition to the cost per stops, other variables set out below must be considered in arriving at the total cost.

ELECTRIC FREIGHT ELEVATORS

(VARIABLE VOLTAGE GEARED)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$17,900	\$19,050	\$22,400	\$26,900	\$31,500
Add per stop	1,680	1,730	1,850	1,960	2,010

RATES INCLUDE: Cost of single automatic control system and levelling device.

ADD: \$1200. per shaft for selective-collective operation.

ELECTRIC FREIGHT ELEVATORS
(A.C. RHEOSTATIC CONTROL - SINGLE AUTOMATIC)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$10,300	\$11,800	\$15,700	\$18,300	\$20,600
Add per stop	1,500	1,550	1,625	1,725	1,800
100 FPM	9,000	10,300	13,900	15,800	17,500
Add per stop	1,400	1,450	1,500	1,575	1,625
50 FPM	8,050	9,000	12,000	13,700	15,300
Add per stop	1,350	1,400	1,450	1,500	1,550

- ADD FOR:
- Selective-collective operation - \$1300
 - Automatic levelling device - 1800
 - Rear doors add \$1400 for the first opening and \$900 for each additional opening.
 - Power operation of doors, add \$2700 for the front or rear door, and \$600 for each additional front or rear door.

HYDRAULIC ELEVATORS

The base cost per shaft is 80% of the cost of A.C. rheostatic elevators of comparable speed and capacity. All costs per stop and variations of controls are 100% of the cost of comparable A.C. rheostatic elevator.

SIDEWALK ELEVATORS

Including sidewalk doors - \$8,000 - \$11,000 each

ELECTRIC DUMBWAITERS

Cost per shaft - \$4,000

Add cost per stop - \$700

ADDITIVES

PENTHOUSE

GENERAL DESCRIPTION: Reinforced concrete floor supported by reinforced concrete or steel frame. Stairs and enclosure c/w firedoors, necessary drainage. Minimal lighting fixtures.

PENTHOUSE - COST FACTORS

(BASE 2500 SQ.FT.-HEIGHT 20'-0")

TYPE	DESCRIPTION OF EXTERIOR CLADDING	RATE
I	Metal ribbed prepainted panels or conc. block.	\$ 9.25
II	Clay face brick with conc. block back-up.	12.30
III	Precast conc. panels with gray finish.	15.30
IV	Precast conc. panels with exposed Dolomite aggregate finish.	17.30
V	Aluminum framed curtain wall.	19.35
VI	Cut limestone with masonry back-up.	22.35

AREA ADJUSTMENT TABLE

1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750
1.30	1.20	1.15	1.10	1.06	1.03	1.00	.97

2,750	3,000	3,250	3,500	3,750	4,000	4,500	5,000
.97	.96	.94	.93	.92	.91	.90	.89

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

MOTELS

GENERAL COMMENTS

The following specifications and rates are developed from a base year of 1969 and follow two basic types, which are load bearing masonry and wood framed buildings and are based on the conventional type of motel, i.e: One or Two Storey side by side or back to back with access to the second floor by exterior means only.

Rates given do not include any commercial area found within a motel structure, or for heating, air conditioning or swimming pools, these items will be treated as additives and will be found on the following pages, heating etc. Page 30 of this section, swimming pools will be found on Page 15 Residential Section 3.

Any commercial area, e.g. Stores, Restaurants, etc. should be classified and costed from the rates obtainable in Section 3C of this manual.

FINISH SPECIFICATIONS

CLASS COMPONENT	4	5
FOUNDATION & FOOTINGS:	6" Masonry walls with poured conc. footings.	8" Masonry walls with poured conc. footings.
FLOOR STRUCTURE:	4" conc. slab on compacted earth.	4" Re. conc. slab on compacted fill.
EXTERIOR WALL STRUCTURE:	Std. grade 2" x 4" @ 16" o.c. insulated stud wall with utility grade wood sheathing.	Const. grade 2" x 4" o.c. insulated stud wall with average grade wood sheathing.
EXTERIOR DOORS AND WINDOWS:	Hollow core slab doors. Single glazed windows.	Hollow core slab doors. Double glazed windows.
ROOF STRUCTURE:	2" x 4" Std. grade wood rafters @ 24" o.c. utility grade sheathing, low cost asphalt shingles.	2" x 6" Rafters or equiv. in wood trusses. Const. grade roof sheathing and 210# asphalt shingles.
INTERIOR FINISHES:		
FLOORS:	Economy Grade V.A.T.	Vinyl asbestos tile.
WALLS:	Painted plaster board/ taped joints.	Painted drywall.
CEILING:	Painted plaster board/ taped joints.	Painted drywall.
BATHROOM FINISHES AND FIXTURES:	Economy grade V.A.T. floor, plaster board walls with impervious paint finish. Economy grade fixtures.	Vinyl asbestos tile floor, impervious painted drywall. Full ceramic tile tub encl. std. comm. fixtures, min. vanity & mirror.
ELECTRICAL:	Bx. wiring/low cost incandescent fixtures.	Bx. wiring/low cost incandescent fixtures.

FOR MOTELS

CONST. CLASS 'D'

6	7	8
10" Masonry walls with poured conc. footings.	10" Re. conc. walls with poured conc. footings.	10"-12" Re. conc. walls with re. conc. footings.
5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted gravel fill.	5" Re. conc. slab on compacted gravel fill.
Const. grade 2" x 4" @ 16" o.c. insulated stud wall with rustic wood sheathing.	Const. grade 2" x 4" @ 16" o.c. insulated stud wall with select quality rustic wood sheathing.	Architectural Designed insulated stud wall with select quality rustic wood sheathing.
Hollow core slab doors. Double glazed windows.	Hollow core slab doors. Double glazed hermetically sealed windows.	Good quality hardwood door, patio door and hermetically sealed windows.
2" x 6" Rafters or equiv. in wood trusses. Const. grade roof sheathing and 210# asphalt shingles.	2" x 6" Rafters or equiv. in wood trusses. Const. grade roof sheathing with asbestos shingles.	2" x 8" Rafters or equiv. in wood trusses, select trade roof sheathing and fir resistive cedar shingles with extensive overhang.
Low cost carpet. Painted drywall. Acoustic tile.	Average quality carpet. Painted plaster Acoustic tile.	Good quality carpet. Good quality panelling with some plaster. Acoustic tile.
Unglazed ceramic tile floor, ceramic tile dado with painted drywall above, full ceramic tile tub encl. std. comm. fixtures, avg. vanity & mirror.	Unglazed ceramic tile floor, ceramic tile dado with vinyl cloth above, full ceramic tub encl. Good quality comm. fixtures. Good quality vanity & mirror. Alum. & glass shower door.	Mosaic tile floor, ceramic tile dado with vinyl cloth above, full ceramic tub encl. select quality fixtures. Full mirror vanity. Custom shower door & illuminated ceiling.
Bx. wiring/std. incandescent fixtures.	Bx. or conduit, good quality incandescent fixtures.	Bx. or conduit, good quality incandescent fixtures.

FINISH SPECIFICATIONS

CLASS COMPONENT	4	5
FOUNDATION & FOOTINGS:	8" Masonry walls with poured conc. footings.	10" Masonry walls with poured conc. footings.
FLOOR STRUCTURE:	4" conc. slab on compacted earth.	4" re. conc. slab on compacted fill.
EXTERIOR WALL STRUCTURE:	8" Decorative block front, conc. block side and rear walls.	Avg. quality 8" masonry wall with face brick and conc. block back up to front. conc. block on side and rear walls.
EXTERIOR DOORS & WINDOWS:	Hollow core slab doors, single glazed windows.	Hollow core slab doors, double glazed windows.
ROOF STRUCTURE	2" x 4" std. grade wood rafters @ 24" o.c. utility grade sheathing. Low cost asphalt shingles.	2" x 6" Rafters or equiv. in wood trusses, const. grade roof sheathing and 210#/asphalt shingles.
INTERIOR FINISHES:		
FLOORS:	Economy Grade V.A.T.	Vinyl asbestos tile.
WALLS:	Painted block.	Painted drywall.
CEILINGS:	Painted plaster board with taped joints.	Painted drywall.
BATHROOM FINISHES AND FIXTURES:	Economy grade vinyl tile floor, Plaster board walls, impervious paint finish, economy grade fixtures.	Vinyl asbestos tile floor, impervious painted drywall. Full ceramic tile tub enclosure, std. comm. fixtures. Min. vanity & mirror.
ELECTRICAL:	B x wiring/low cost incandescent fixtures.	B x wiring/low cost incandescent fixtures.

FOR MOTELS

CONST. CLASS 'C'

6	7	8
10" Poured conc. walls with poured conc. footings.	10" Re. conc. walls with poured conc. footings.	10"-12" Re. conc. walls with re. conc. footings.
5" re. conc. slab on compacted fill.	5" re. conc. slab on compacted gravel fill.	5" re. conc. slab on compacted gravel fill.
Good quality masonry wall with face brick and conc. block back-up.	Select quality masonry wall with face brick, some cut stone and conc. block back-up.	Select quality masonry wall with face brick and natural field stone with conc. block back-up.
Hollow core slab doors, double glazed windows.	Hollow core slab doors, double glazed hermetically sealed windows.	Good quality hardwood doors, patio door and hermetically sealed windows.
2" x 6" Rafters or equiv. in wood trusses const. grade, roof sheathing and 210#/asphalt shingles.	2" x 6" Rafters or equiv. in wood trusses, const. grade roof sheathing with asbestos shingles.	2" x 8" Rafters or equiv. in wood trusses, select grade sheathing and fir resistive cedar shingles. Extensive overhang.
Low cost carpet. Painted drywall. Acoustic tile.	Avg. quality carpet. Painted plaster. Acoustic tile.	Good quality carpet. Good quality panelling with some plaster. Acoustic tile.
Unglazed ceramic tile floor, ceramic tile dado with painted drywall above, full ceramic tub encl. Avg. vanity & mirror.	Unglazed ceramic tile floor, ceramic tile dado with vinyl cloth above, full ceramic tub encl. Good quality vanity & mirror. Alum. & glass shower door.	Mosaic tile floor, ceramic tile dado with vinyl cloth above, full ceramic tile tub encl. Select quality fixtures. Full mirror vanity. Custom shower door & illum. ceiling.
Bx wiring/Std. incandescent fixtures.	Bx or conduit, good quality incandescent fixtures.	Bx or conduit, good quality incandescent fixtures.

MOTEL COST FACTORS

SIDE BY SIDE

BASIC HEIGHT 9'

CONST. CLASS 'C'

CLASS UNITS \	4	5	6	7	8
4 UNITS - UP	8.60	11.00	12.30	13.35	14.65
4 UNITS - DOWN	9.75	12.60	14.40	16.10	17.85
8 UNITS - UP	8.35	10.65	11.90	12.90	14.15
8 UNITS - DOWN	9.50	12.25	14.00	15.65	17.35
12 UNITS - UP	8.20	10.50	11.75	12.70	13.95
12 UNITS - DOWN	9.35	12.10	13.85	15.45	17.15
16 UNITS - UP	8.15	10.40	11.65	12.60	13.85
16 UNITS - DOWN	9.30	12.00	13.75	15.35	17.05
24 UNITS - UP	8.10	10.35	11.60	12.55	13.80
24 UNITS - DOWN	9.25	11.95	13.70	15.30	17.00
32 UNITS - UP	8.05	10.30	11.55	12.50	13.75
32 UNITS - DOWN	9.20	11.90	13.65	15.25	16.95

BACK TO BACK

BASIC HEIGHT 9'

CLASS UNITS \	4	5	6	7	8
4 UNITS - UP	8.45	10.85	12.10	13.15	14.40
4 UNITS - DOWN	9.60	12.40	14.20	15.85	17.60
8 UNITS - UP	7.95	10.20	11.35	12.30	13.45
8 UNITS - DOWN	9.10	11.75	13.45	15.00	16.65
12 UNITS - UP	7.75	9.95	11.10	12.00	13.10
12 UNITS - DOWN	8.90	11.55	13.20	14.70	16.30
16 UNITS - UP	7.65	9.80	10.95	11.85	12.95
16 UNITS - DOWN	8.80	11.40	13.05	14.55	16.15
24 UNITS - UP	7.55	9.70	10.85	11.75	12.85
24 UNITS - DOWN	8.70	11.30	12.95	14.45	16.05
32 UNITS - UP	7.50	9.65	10.80	11.70	12.80
32 UNITS - DOWN	8.65	11.25	12.90	14.40	16.00

AREA ADJUSTMENT TABLES

AREA	175	200	225	250	275	300	325	350	400	500
FACTOR	1.48	1.36	1.23	1.13	1.06	1.00	.97	.95	.92	.89

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

MOTEL COST FACTORS

SIDE BY SIDE

BASIC HEIGHT 9'

CONST. CLASS'D'

CLASS UNITS \	4	5	6	7	8
4 UNITS - UP	8.30	10.30	11.30	12.65	14.15
4 UNITS - DOWN	9.40	11.80	13.30	15.25	17.25
8 UNITS - UP	8.05	9.95	10.95	12.20	13.65
8 UNITS - DOWN	9.15	11.45	12.95	14.90	16.80
12 UNITS - UP	7.90	9.80	10.80	12.00	13.45
12 UNITS - DOWN	9.00	11.30	12.85	14.75	16.65
16 UNITS - UP	7.85	9.70	10.70	11.90	13.35
16 UNITS - DOWN	8.95	11.20	12.80	14.65	16.55
24 UNITS - UP	7.80	9.65	10.65	11.85	13.30
24 UNITS - DOWN	8.90	11.15	12.75	14.60	16.50
32 UNITS - UP	7.75	9.60	10.60	11.80	13.25
32 UNITS - DOWN	8.85	11.10	12.70	14.55	16.45

BACK TO BACK

BASIC HEIGHT 9'

CLASS UNITS \	4	5	6	7	8
4 UNITS - UP	8.25	10.20	11.25	12.55	14.05
4 UNITS - DOWN	9.35	11.70	13.25	15.15	17.15
8 UNITS - UP	7.75	9.55	10.50	11.70	13.10
8 UNITS - DOWN	8.85	11.05	12.60	14.45	16.30
12 UNITS - UP	7.55	9.30	10.25	11.40	12.75
12 UNITS - DOWN	8.65	10.85	12.40	14.20	15.95
16 UNITS - UP	7.45	9.15	10.10	11.25	12.60
16 UNITS - DOWN	8.55	10.70	12.30	14.10	15.85
24 UNITS - UP	7.35	9.05	10.00	11.15	12.50
24 UNITS - DOWN	8.45	10.60	12.20	14.05	15.75
32 UNITS - UP	7.30	9.00	9.95	11.10	12.45
32 UNITS - DOWN	8.40	10.55	12.15	14.00	15.70

AREA ADJUSTMENTS TABLES

AREA	175	200	225	250	275	300	325	350	400	500
FACTOR	1.48	1.36	1.23	1.13	1.06	1.00	.97	.95	.92	.89

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

HOTELS - MOTOR HOTELS - MOTELS

HEATING & COOLING SYSTEMS

TYPE	DESCRIPTION	COST PER. SQ. FT.			
		LOW COST	AVE.	GOOD	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$ 0.80	\$0.95	\$1.10	\$1.30
	Forced Air (with ducts)	0.80	0.95	1.10	1.30
	Baseboard (Hot Water or Electrical) Induction Units	1.00 1.50	1.10 1.75	1.25 2.00	1.50 2.50
COOLING	Refrigerated Type	1.25	1.40	1.70	2.00
	Evaporative Type	0.80	0.95	1.10	1.30
COMBINERS	Hot and Chilled Water (Zoned)	2.75	3.25	3.75	4.25
	Warm and Cooled Air (Zoned)	2.50	3.00	3.25	3.75

EIGHT ADJUSTMENT: 3% for each foot of wall height over 15'0".

NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).

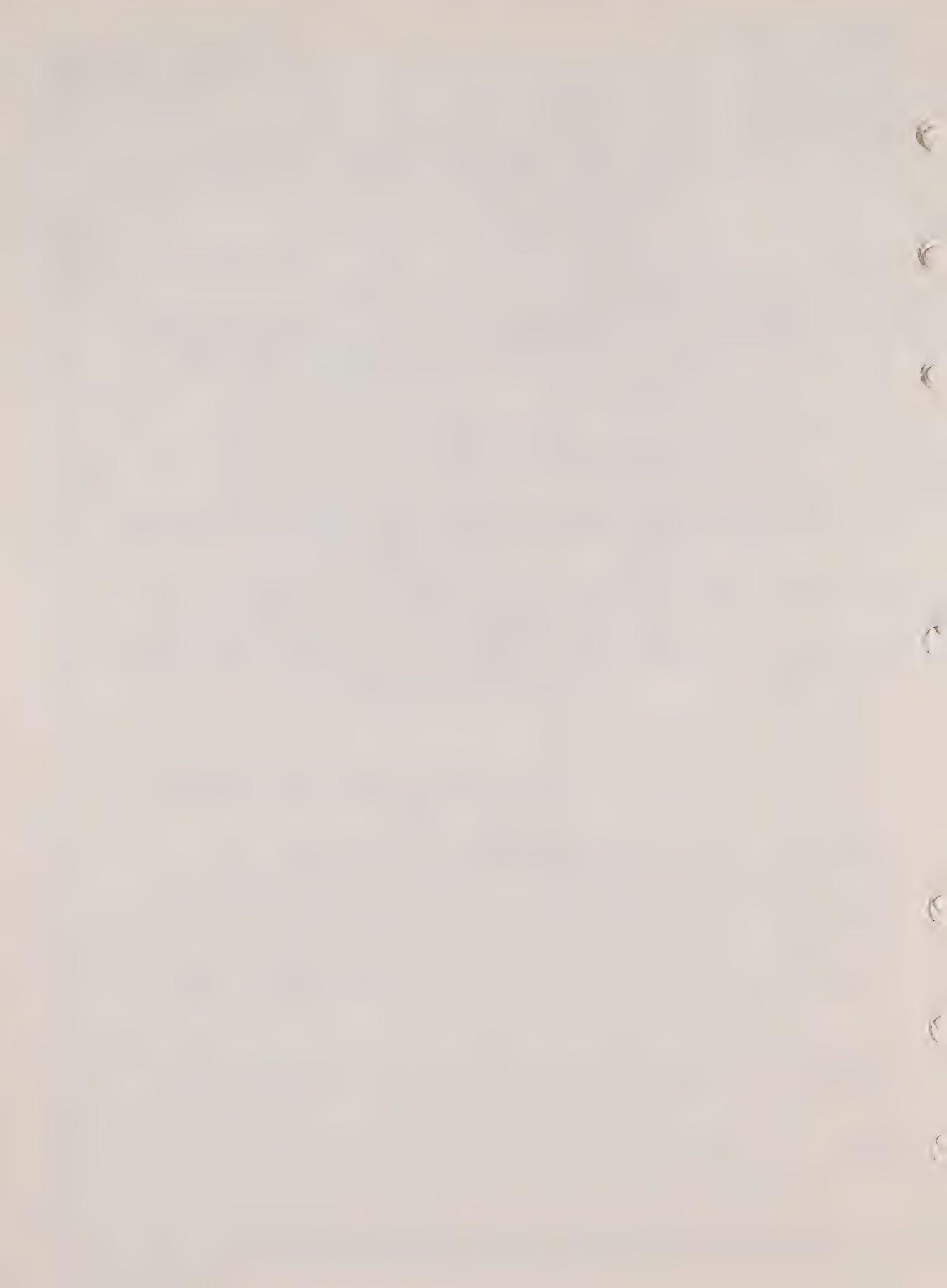
SPRINKLERS

COST FACTORS

BUILDING AREA IN SQ. FT.	SYSTEM TYPE	TYPE OF INSTALLATION	
		OPEN	CONCEALED
2,000 to 4,000	Wet or Dry	\$ 0.55	\$ 0.60
4,000 to 6,000	Wet or Dry	0.50	0.55
6,000 to 8,000	Wet or Dry	0.45	0.50
8,000 to 10,000	Wet or Dry	0.40	0.45
10,000 to 20,000	Wet or Dry	0.35	0.40
20,000 And Up	Wet or Dry	0.30	0.35

NOTE: Above Square Foot Cost Factors to be applied against the total sprinklered floor area. (exterior measurements).

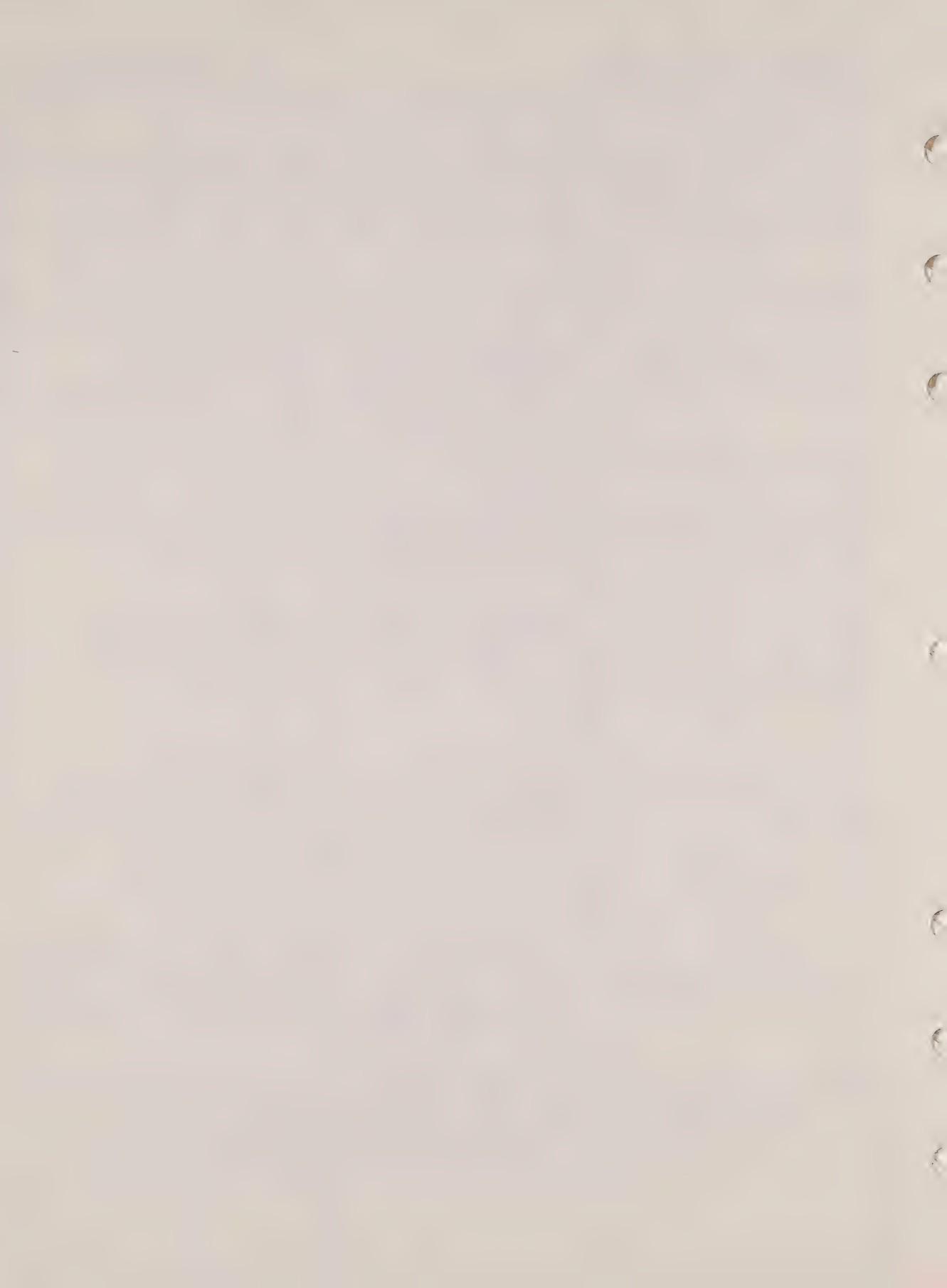
CLASS COMPONENTS	D - 4	D - 5
FOUNDATIONS:	Conc. block walls below frost line, incl. wpg. to perimeter. Nat. Bldg. Code Std. footings.	Conc. block walls below frost line, incl. wpg. to perimeter, Nat. Bldg. Code Std. footings.
FLOOR:	4" Re. conc. slab on compacted fill.	4" Re. conc. slab on compacted fill.
EXTERIOR CLADDING:	Bevel siding with fibre-board sub sheathing on frame wall structure incl. insulation	Stucco & Wire mesh with sub sheathing on frame wall structure incl. insulation.
GLAZING:	$\frac{1}{8}$ " Tempered plate. Wood framed 40%	$\frac{1}{8}$ " Tempered plate. Steel framed 40%
STRUCTURAL FRAMING:	Average quality framing Wooden joists with T&G decking.	Average quality wooden joists &/or cols. & beams with T&G decking.
ROOF FINISH:	Batt insulation Ready rolled roofing. G.I. Flashing	1" Rigid insul. B.U. Roofing. G.I. Flashing
INT. FINISHES: SERVICE AREA: FLOORING:	Economy grade linoleum.	Avg. quality vinyl asbestos tile.
WALLS:	Painted drywall.	Painted drywall.
CEILING:	Painted drywall.	Mineral acoustic panels with exposed tee bar suspension.
SUITES: FLOORING:	Economy grade linoleum.	Avg. quality V.A.T.
WALLS:	Painted masonry.	Painted drywall.
CEILING:	Painted drywall.	Painted drywall.
WASHROOMS:	Finishes similar to above.	Finishes similar to above. Glazed hardboard dado.
ELECTRICAL:	Avg. quality fixtures. Adequate number of outlets.	Avg. quality fixtures. Average number of outlets.
PLUMBING:	Economy quality fixtures.	Standard quality fixtures.



HOTELS, & MOTOR HOTELS
SECTION

SECTION 6C PAGE 33
BASE YEAR 1969

D - 6	D - 7	D - 8
Conc. block wall below frost line, incl. wpgf. & 1" rigid insul. to perimeter. Nat. bldg. Code Std. footings	Re. conc. wall below frost line, incl. wpgf. & 1" rigid insul to perimeter, Nat. Bldg. Code Std. footings.	Re. conc. wall below frost line, incl. wpgf. & 1" rigid insul to perimeter, Nat. Bldg. Code Std. footings.
5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
Clay face brick veneer with sub sheathing on frame wall structure incl. insulation	25% Ledge rock veneer. 75% Clay face brick veneer with sub sheathing on frame wall structure and insulation.	50% Ledge rock veneer. 50% Clay face brick veneer with sub sheathing on frame wall structure and insulation.
$\frac{1}{4}$ " Tempered plate. Alum. framed 40%	$\frac{1}{4}$ " Tempered Plate. Alum. framed 40%	$\frac{1}{4}$ " Tempered plate. Alum. framed 40%
Good quality wooden joists &/or cols. & beams with T&G decking.	Good quality wooden joists &/or cols & beams with T&G decking.	Laminated wood decking with cols. and beams.
1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	2" Rigid insul. B. U. Roofing. Alum. Flashing.
Good quality vinyl asbestos tile. Corridor low cost carpeting.	Avg. quality carpeting.	Avg. quality carpeting.
Painted drywall.	Painted plaster.	Painted plaster.
Mineral acoustic panels with exposed tee bar suspension.	Mineral acoustic tile applied to metal suspension.	Mineral acoustic tile applied to metal suspension.
Low cost carpeting.	Low cost carpeting.	Avg. qual. carpeting.
Painted drywall.	Painted plaster.	Painted plaster.
Textured plaster.	Textured plaster.	Susp. Lath & Plaster painted.
Ceramic tile dado & mosaic tile flooring. Small vanity.	Ceramic tile dado & flooring. Avg. size vanity Standard shower doors.	Ceramic tile dado & flooring Avg. size vanity. Standard shower doors.
Good quality fixtures incl. some fluorescents Avg. number of outlets.	Good quality fixtures incl. some fluorescents Avg. number of outlets.	Good quality fixtures incl. some fluorescents. Numerous outlets.
Standard quality fixtures.	Good quality fixtures.	Select quality fixtures.



COST FACTORS

FIRST FLOOR RATES

BASE 14'0" HIGH 10,000 Sq.Ft.

CONSTRUCTION CLASS "D"

Class Shape	4	4½	5	5½	6	6½	7	7½	8
A	9.10	10.20	11.25	12.15	13.00	13.70	15.05	16.00	16.90
B	9.55	10.70	11.80	12.75	13.65	14.40	15.80	16.80	17.75
C	10.00	11.20	12.40	13.35	14.30	15.05	16.55	17.60	18.60

SECOND FLOOR RATES

BASE 12'0" HIGH 10,000 Sq.Ft.

Class Shape	4	4½	5	5½	6	6½	7	7½	8
A	7.15	8.05	8.95	9.65	10.35	10.90	12.10	13.00	13.90
B	7.45	8.35	9.30	10.05	10.75	11.35	12.60	13.50	14.45
C	7.70	8.70	9.65	10.40	11.20	11.75	13.05	14.05	15.00

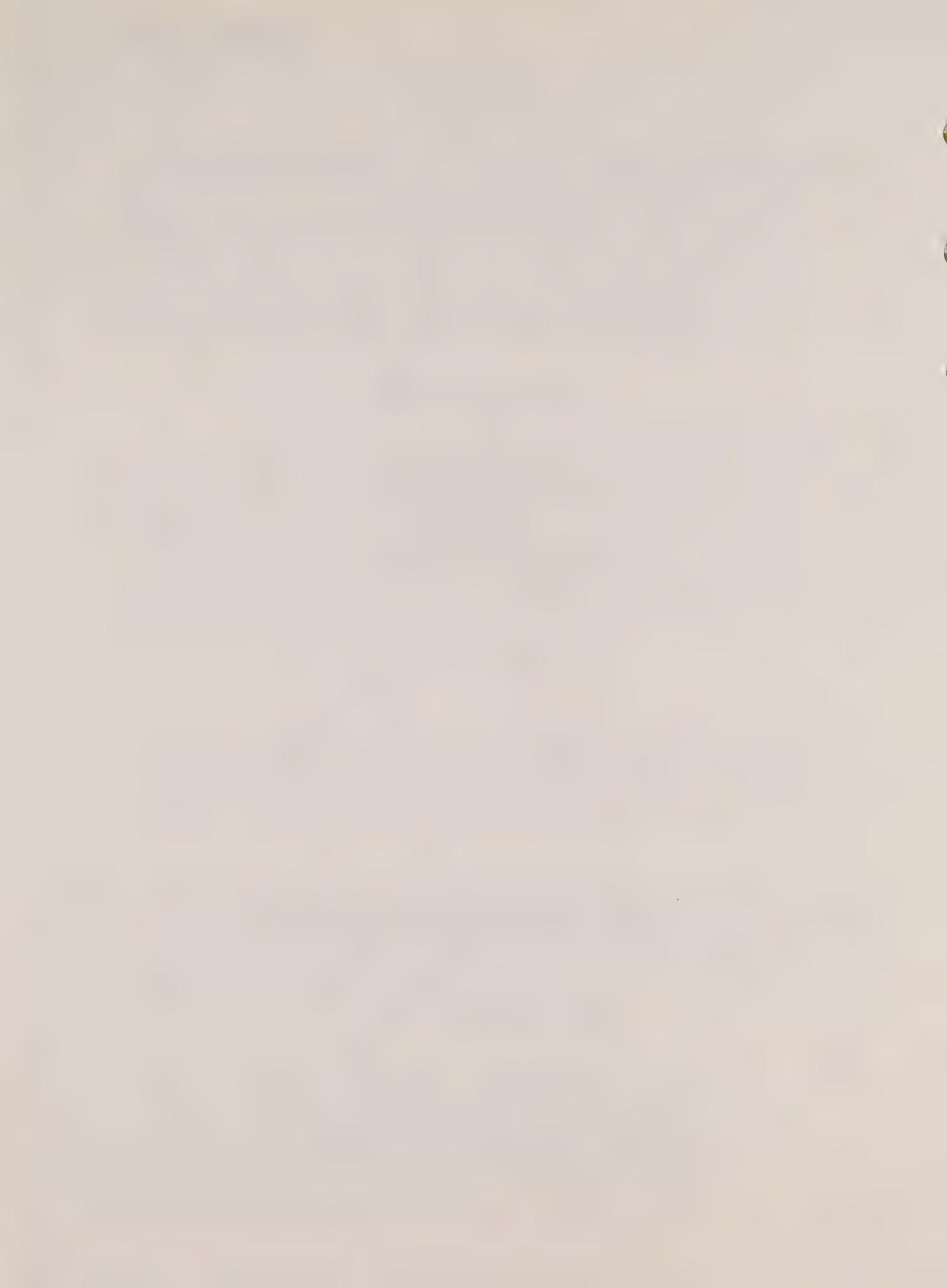
AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.31	1.21	1.14	1.10	1.07	1.05	1.03	1.01

9,000	10,000	11,000	12,000	14,000	16,000	18,000	20,000
1.01	1.00	.99	.98	.96	.95	.94	.93

STOREY ADJUSTMENT TABLE

3	4	5	6
1.02	1.03	1.04	1.05



THEATRES AND CINEMAS

GENERAL COMMENTS

Specifications follow for two basic types of structures.

Auditoria specifications and cost factors have been prepared, describing a finished shell-type structure. Specifications and cost factors are included for the Lobby-Foyer portion of the building, and may be treated as attached to the auditorium structure or as a finished area within the auditorium itself. With these rate schedules and with the cost factors for the various additives, it is possible to obtain the replacement cost new of various buildings whether they are theatres, or cinemas.

The auditoria specifications describe present-day components which are usually visible to the eye.

The cost factors for attached Lobby-Foyers take into consideration 3 exterior structural walls and all the finishes within, excluding the partitions, whereas the cost factors for Lobby-Foyers within an auditorium structure take into consideration only a dividing wall and all the finishes within.

In making valuations of theatres, cinemas, etc. the assessor must be aware of the fact that normal seating requirements in current single auditorium construction ranges between 600 - 800 seats per individual structure. An average height of 28 feet is prevalent.

Percent good tables dealing with normal physical deterioration and normal functional obsolescence must be determined and applied realistically by the assessor and the prevalence of abnormal functional obsolescence must be considered in dealing with many older structures.

The cost factors and the related additives included in this section are based on information developed from a base year of 1969.

S P E C I F I C A T I O N S F O R

CLASS COMPONENTS	C - 5	C - 6	C - 7
FOUNDATION:	Conc. block or re.conc. below frost line as per Nat. Bldg. Code.	Conc. block or re.conc. below frost line as per Nat. Bldg. Code	Re. conc. wall and footings below frost line as per Nat. Bldg. Code
FLOOR:	4" Re.conc. sloped slab on fill. Painted	4" Re.conc. sloped slab on fill. Painted	4" Re.conc. sloped slab on fill. Painted
STRUCTURAL FRAMING:	Long span steel joists steel cols. and beams. Clear span or equiv.	Long span steel joists steel cols. and beams. Clear span or equiv.	Long span stl. joists stl. cols. and beams Clear span or equiv.
EXTERIOR WALLS:	Conc. blk. side and rear walls with stucco. Conc. blk. front wall or equiv.	12" Masonry walls, face brk. to side & rear walls. Conc. blk. front wall or equiv.	12" Masonry walls, good quality facebrick to side & rear walls. Conc. blk. front wall or equiv.
ROOF STRUCTURE:	1½" Stl. deck. 1" rigid insul. 3 ply B.U. roofing. G.I. flashing or equiv.	1½" Stl. deck. 1" rigid insul. 3 ply B.U. roofing, G.I. flashing or equiv.	1½" Stl. deck. 1" rigid insul. 4 ply B.U. roofing, G.I. flashing or equiv.
EXTERIOR DOORS:	Hollow metal fire doors. Painted.	Hollow metal fire doors. Painted.	Hollow metal fire doors. Painted.
STANDEE BARRIERS:	Conc. blk. painted. Wood top.	Conc. blk. plastered. Painted Wood top.	Conc. blk. metal lath and plaster with painted wood top.
INTERIOR FIN.S: FLOOR	Painted.	Painted. Broadloom to aisles and standee.	Painted. Broadloom to aisles and standee.
WALLS:	Conc. blk. painted.	Drywall painted or equiv.	Metal lath & plaster. painted.
CEILING:	Joists and roof deck painted.	Susp. drywall painted or equiv.	Susp. drywall painted or equiv.
PROJECTION BOOTH:	500 S.F. conc. mezz. Conc. blk. walls, painted H.M. doors. 2 - plumbing units.	500 S.F. conc. mezz. Conc. blk. walls, painted H.M. doors, 2 - plumbing units.	500 S.F. conc. mezz- Conc. blk. walls, painted H.M. doors, 2 - plumbing units.
PLUMBING AND WASHROOM FINISHES:	Low cost fixtures as per Bldg. Code. Vinyl asbestos tile. Drywall to walls.	Average quality fixtures as per Bldg. Code, trzo floor, ½" cer. wall covering.	Good quality fixtures as per Bldg. Code. Ceramic tile floor. Ceramic tile walls.
ELECTRICAL:	Susp. low cost house lights. Ex wiring. Dimmer controls.	Recessed spotlight house lights. R.C. wiring. Dimmer controls.	Recessed spotlights. R.C. wiring. Dimmer controls.

AUDITORIUMS

CONST. CLASS 'C'

C - 8	C - 9	C - 10
Rec. conc. wall and footings below frost line as per Nat. Bldg. Code.	Re. conc. wall and footings below frost line as per Nat. Bldg. Code.	Re. conc. wall and footings below frost line as per Nat. Bldg. Code.
4" Re.conc. sloped slab on fill. Painted.	4" Re. conc. sloped slab on fill. Painted.	4" Re. conc. sloped slab on fill. Painted.
Long span stl. joists steel cols. and beams. Clear span or equiv.	Long span steel joists steel cols. and beams. Clear span or equiv.	Long span steel joists steel cols. and beams. Clear span or equiv.
4" precast conc. panels with masonry back-up to side & rear walls. Conc. blk. front wall or equiv.	4" limestone with masonry back-up to side and rear walls. Conc. blk. front wall or equiv.	Granite with masonry back-up to side and rear walls. Conc. blk. front wall or equiv.
1½" Stl. deck. 1½" rigid insul. 4 ply B.U. roofing, Alum. flashing or equiv.	1½" Stl. Deck. 2" rigid insul. 4 ply B.U. roofing. Copper flashing or equiv.	1½" Stl. deck. 2" rigid insul. 4 ply B.U. roofing. Copper flashing or equiv.
Hollow metal fire doors and paint finish.	Select quality H.M. exit doors. Glazed stainless stl. auditorium entrance doors. some soundproofing.	Excellent quality H.M. exit doors. Bronzed sound-proof auditorium entrance doors or equiv.
Conc. blk. plastered with vinyl covering natural wood top.	Conc. blk. plastered with vinyl covering natural wood top.	Conc. blk. with redwood finish and matching wood top.
50% painted. 50% good quality broadloom.	Select quality broadloom.	Excellent quality broadloom.
Good quality metal lath & plaster, acoustic finish.	Architecturally designed metal lath & plaster.	Excellent quality vermiculite, plaster or equiv.
Susp. metal lath & plaster painted or equiv.	Susp. metal lath & acoustic plaster or equiv.	Susp. vermiculite, plaster painted or equiv.
500 S.F. conc. mezz. plastered conc. blk. walls, painted H.M. doors, 2 - plumbing units.	500 S.F. conc. mezz. pl. conc. blk. with vinyl covering, painted H.M. drs. 2 - plumbing units.	500 S.F. conc. mezz. conc. blk. vinyl H.M. doors or equiv. Same as Class 9.
Good quality fixtures as per Nat. Bldg. Code. Quarry tile floors. Ceramic tile walls.	Select quality fixtures as per Natl. Bldg. Code. Marble floor finish. Marble wall finish.	Excellent quality fixtures as per Nat. Bldg. Code. Marble floor finish. Marble wall finish.
Good quality recessed spotlights. R.C. wiring Dimmer controls.	Select quality recessed spotlights and wall fixtures. R.C. wiring. Dimmer controls.	Excellent quality recessed spotlights and wall fixtures. R.C. wiring. Dimmer controls.

S P E C I F I C A T I O N S F O R

CLASS COMPONENTS	C - 5	C - 6	C - 7
FOUNDATION:	Conc. block or re. conc. below frost line as per Nat. Bldg. Code	Conc. block or re. con. below frost line as per Nat. Bldg. Code.	Re. conc. wall and footings below frost line as per Nat. Bldg. Code.
FLOOR:	4" Re. conc. on granular fill. Trowel finish.	4" Re. conc. on granular fill. Trowel finish.	4" Re. conc. on granular fill. Trowel finish.
STRUCTURAL FRAMING:	Steel joists, beams, bridging, etc.	Steel joists, beams, bridging, etc.	Steel joists, beams, bridging, etc.
EXTERIOR WALLS:	Conc. block. Good painted stucco finish to front and side walls. Face brick filler panels to front wall or equiv.	12" masonry walls. Face brick to front and side walls. Some glazed mosaic tile to front wall or equiv.	12" masonry walls. Face brick to front and side walls. Some precast conc. panels to front wall or equiv.
ROOF STRUCTURE:	1½" Steel deck. 1" rigid insul. 3 ply B.U. roofing. Painted G.I. flashing or equiv.	1½" Steel deck. 1" rigid insul. 3 ply B.U. roofing. Painted G.I. flashing, or equiv.	1½" Steel deck. 1" rigid insul. 4 ply B.U. roofing. Alum. flashing or equiv.
ENTRANCE:	Low cost extruded alum. entrance with plate glass doors or equiv.	Average quality extruded alum. entrance with plate glass doors or equiv.	Good quality extruded alum. entrance with plate glass doors or equiv.
BOX OFFICE INTERIOR FIN.S: FLOOR:	Vinyl asbestos tile or equiv.	Average quality broadloom and terrazzo.	Good quality broadloom and patterned terrazzo.
WALL:	Masonry painted	Drywall painted.	Metal lath and plaster painted or equiv.
CEILING:	Low cost acoustic tile or equiv.	Average quality susp. acoustic tile or equiv.	Good quality susp. acoustic tile or equiv.
ELECTRICAL:	Low cost fluorescent fixtures. R.C. wiring.	Average quality fluor. fixtures. R.C.wiring	Good quality fluor. fixtures.R.C.wiring.

L O B B Y -- F O Y E R

CONST. CLASS 'C'

C - 8	C - 9	C - 10
Re. conc. wall and footings below frost line as per Nat. Bldg. Code.	Re. conc. wall and footings below frost line as per Nat. Bldg. Code.	Re. conc. wall and footings below frost line as per Nat. Bldg. Code.
4" Re. conc. on granular fill. Trowel finish.	4" Re. conc. on granular fill. Trowel finish.	4" Re. conc. on granular fill. Trowel finish.
Steel joists, beams, bridging, etc.	Steel joists, beams, bridging, etc.	Steel joists, beams, bridging, etc.
4" precast conc. panels with masonry back-up to front and side walls. Some travertine facing to front wall or equiv.	4" limestone with masonry back-up to front and side walls. Some granite fac-ing to front wall or equiv.	Granite with masonry back-up to front and side walls.
1½" Steel deck. 1½" rigid insul. 4 ply B.U. roofing. Alum. flashing or equiv.	1½" Steel deck. 2" rigid insul. 4 ply B.U. roofing Copper flashing or equiv.	1½" Steel deck. 2" rigid insul. 4 ply B.U. roofing Copper flashing or equiv.
Good quality anodized alum. entrance with plate glass doors or equiv.	Select quality stainless steel entrance with plate glass doors or equiv.	Excellent quality bronzed entrance with plate glass doors or equiv.
Good quality broadloom and quarry tile.	Select quality broadloom and marble.	Excellent quality broadloom and marble.
Metal lath and plaster acoustical finish coat.	Metal lath ornate plaster acoustical finish coat.	Metal lath and plaster with vinyl covering.
Good quality metal lath and plaster. Acoustical finish or equiv.	Select quality metal lath and plaster. Acoustical finish or equiv.	Excellent quality metal lath and plaster. Ornate finish or equiv.
Good quality recessed fluor. fixtures and spotlights. R.C.wiring.	Select quality recessed fluor. fixtures and spotlights. R.C.wiring.	Excellent quality recessed fluor. fixtures and spotlights. R.C. wiring.

AUDITORIUM

COST FACTORS

(BASE 6,000 SQ. FT.)

CONST. CLASS 'C'

CLASS SHAPE \	5	6	7	8	9	10
A	14.40	17.95	20.60	24.15	32.20	45.10
B	15.25	19.00	21.85	25.60	34.10	47.80
C	15.85	19.75	22.65	26.55	35.40	49.60
STOREY HT.	28'0"	28'0"	28'0"	28'0"	28'0"	28'0"

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.41	1.25	1.14	1.08	1.00	.97	.93	.90
10,000	11,000	12,000	13,000	14,000	16,000	18,000	20,000
.87	.85	.83	.81	.79	.76	.73	.71
22,000	24,000	26,000	28,000	30,000	32,000	35,000	38,000
.69	.67	.66	.65	.64	.63	.62	.61

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE: With sloping floors determine the average height.

Cost factors do not include basement, heating, air conditioning or sprinklers. Second storey cost factors may be obtained by using 85% of first storey rates.

STAGE-COST FACTORS

A	4' high hardwood stage on built up wood frame	\$3.40
B	Hardwood stage on wood sleepers.	\$1.40
C	Steel grating. Prop hoist gallery.	\$5.60

BALCONY-COST FACTORS

A	Elevated reinf. conc. stepped 14" high. Painted. Susp. metal lath & plaster soffit. Balcony rail.	\$8.35
B	Elevated reinf. conc. stepped 18" high. Painted. Susp. metal lath & plaster soffit. Balcony rail.	\$9.00

AUDITORIUMS

LOBBY-FOYERS ATTACHED TO AUDITORIUMS

COST FACTORS

CLASS	5	6	7	8	9	10
RATES	10.45	13.45	16.35	20.50	29.90	37.60
STOREY HT.	14'	14'	14'	14'	14'	14'

AREA ADJUSTMENT TABLE

(BASE 2,500 SQ. FT.)

1,000	1,500	2,000	2,500	3,000	3,500	4,000
1.28	1.15	1.06	1.00	.95	.91	.88
4,500	5,000	7,000	9,000	11,000	13,000	15,000
.85	.83	.76	.71	.67	.64	.62

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

NOTE: Cost Factors do not include basement, heating, air conditioning sprinklers or partitions. Second storey cost factors may be obtained by using 80% of first storey rates.

LOBBY-FOYERS WITHIN AN AUDITORIUM

COST FACTORS

CLASS	5	6	7	8	9	10
RATES	6.65	9.00	11.60	14.20	22.30	27.55
STOREY HT.	10'	10'	10'	10'	10'	10'

AREA ADJUSTMENT TABLE

(BASE 2,500 SQ. FT.)

1,000	1,500	2,000	2,500	3,000	3,500	4,000
1.33	1.17	1.07	1.00	.94	.89	.86
4,500	5,000	7,000	9,000	11,000	13,000	15,000
.83	.80	.72	.66	.62	.59	.56

HEIGHT ADJUSTMENT: 2% for each foot of wall height variation.

NOTE: Cost Factors do not include basement, heating, air conditioning sprinklers or partitions. Second storey cost factors may be obtained by using 100% of the first storey rates and adding for floor structure by using mezzanine costs.

ADDITIVES TO -- AUDITORIUM - LOBBY - FOYER

HEATING, AIR CONDITIONING AND VENTILATION

ITEM	DESCRIPTION	COST PER SQ. FT.			
		LOW COST	AVG.	GOOD	EXCELLENT
HEATING	Hot Water Forced Air (with ducts). Hot Water convector or radiator.	1.00	1.15	1.25	1.50
COOLING SYS.	Refrigerated Air Conditioning	2.00	2.50	3.00	3.50
VENTILATION	Ventilation	.25	.30	.35	.45

HEIGHT ADJUSTMENT: 3% for each foot of wall height over 15'-0".

MEZZANINE FLOOR
COST FACTORS

DESCRIPTION	COST PER SQ. FT.
2½" - 3" Reinf. conc. on metal pans. Stl. frame or 5" - 6" Reinf. conc. on Stl. frame	\$3.00
8" Pre-cast conc. slab on Stl. frame.	\$4.00
6" Pre-cast conc. slab on Stl. frame.	\$3.25

MARQUEE OR CANOPY
COST FACTORS

DESCRIPTION	COST PER SQ. FT.
Porcelained metal facia and soffitt on stl. frame. Some recessed spotlights.	\$6.20
Average quality pre-cast conc. facia, metal lath and plaster soffitt. Some recesses spotlights.	\$5.45
Good quality pre-cast conc. facia metal lath and plaster. Soffitt. Some recessed spotlights.	\$5.60

ADDITIVES

PARTITIONS

(BASE HEIGHT=10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
I	CLAY TILE - Painted.				
	LOW COST PLYWOOD - Painted or prefinished, wood framed.				
	LOW COST PLYWOOD PARTIALLY GLAZED - Painted or prefinished, Wood framed.				
	HARDBOARD - Prefinished on wooden studs.	\$3.00	\$1.50	\$1.05	\$0.75
II	PLASTER ON LATH - Painted, wood or metal studs				
	SOLID PLASTER - Painted, furred.				
	CONCRETE BLOCK - Painted, incl.				
	DECOR BLOCK, SHADOW BLOCK - etc.				
	DRYWALL - Painted, or wooden studs.	4.00	2.00	1.35	1.00
III	PLASTER - Painted, on clay tile.				
	GLAZED - Conc. block or tile.				
	DRYWALL, VINYL COVERED - Wood or metal studs.				
	DRYWALL PANELS - Painted, metal framed.				
	DRYWALL PANELS PARTIALLY GLAZED - Painted, metal framed.				
	DRYWALL, VINYL COVERED - metal framed.	5.00	2.50	1.65	1.25

HEIGHT ADJUSTMENT: Allow 10% foot of height variation.

Ratios are based on the proportion of one linear foot of partitioning to the net square footage of floor area.

The above cost factors take into consideration the usual number of doors required for average installation.

THEATRES

DRIVE-IN

To establish cost factors for Concessions buildings (which includes Projection Booth area), use Fast Food Restaurant Cost Factors Sec. 3, Page 18.

SCREEN -- COST FACTORS

TYPE	DESCRIPTION	COST PER SQ. FT.
I	Wood frame Structural creosoted main bracing and struts metal or wood screen framing. Plywood screen. Painted, Reinf. Conc. foundations.	\$3.50 - 4.00
II	Wood frame as above $\frac{1}{4}$ " asbestos board screen. Reinf. Conc. foundations.	\$4.00 - 4.25
III	Structural Steel frame $\frac{1}{4}$ " asbestos or light gauge metal siding on metal or wood frame, painted. Reinf. Conc. foundations.	\$5.00 - 5.50
IV	Structural Steel frame. 20 ga. metal screen with a vinyl paint finish. Reinf. Conc. foundations.	\$6.50 - 6.75
V	Reinf. or Pre-cast Conc. Structural screen and frame. 20 ga. metal. Screen facing. Vinyl paint finish. Reinf. Conc. foundations.	\$7.40 - 7.75

The above cost factors are to be applied against only the actual screen area.

TICKET BOOTHS --- \$850 - \$900 each (based on 24 sq. ft.).

SPEAKER POSTS --- \$20.00 each

HEATER POSTS --- \$35.00 each

NOTE: SPEAKER POSTS include the cost of posts, trenching, junction boxes & wiring.

HEATER includes the cost of trenching, wiring and the main control panel.

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MEDICAL-DENTAL BUILDINGS

GENERAL COMMENTS

Specifications follow for two basic Construction Classes B & C. From the cost factors shown any medical building structure can be calculated (i.e. walk-up to multi-storey) using the same basic rates, with the storey adjustment table.

The cost factors contained in the following tables are predicated on average construction costs for medical buildings of various quality classes and design. The cost factors include those components shown in the specifications as well as normal overhead, profit, engineering and architectural fees.

Partitions, elevators, mechanical systems (except plumbing), basements, garages are considered as additives to the basic cost of the structure.

The specifications and cost factors included in this Section are based on information developed from a base year of 1969.

S P E C I F I C A T I O N S F O R

CLASS SHAPE	B - 5	B - 6	B - 7
FOUNDATIONS: (Nat. Bldg. Code Stds.)	Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.	Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.	Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.
FLOOR:	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR:			
MASSONRY:	Clay facebrick with conc. block back-up and insulation.	Precast conc. units with exposed common aggregate; some clay facebrick with conc. block back-up and rigid insulation.	Precast conc. units with exposed common aggregate and rigid insulation.
GLAZING:	$\frac{1}{4}$ " Tempered plate. Steel framed 40%.	$\frac{1}{4}$ " Tempered plate. Alum. framed 40%.	$\frac{1}{4}$ " Tempered plate. Alum. framed 40%.
ROOF FINISH:	1" Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.	1 $\frac{1}{2}$ " Rigid insul. B.U. Roofing. G.I. Flashing.
INTERIOR:			
FLOORING:	Vinyl asbestos tile.	Rubber tile or select V.A.T.	Rubber tile or select V.A.T.
WALLS:	Drywall painted.	Drywall painted.	Plaster painted.
CEILING:	Mineral acoustic panels with exposed tee bar susp.	Mineral acoustic panels with exposed tee bar susp.	Mineral acoustic tile applied to metal susp.
CORE:	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted conc. block walls. Washrooms with vinyl asbestos tile. Low cost ceiling tile. Painted stairwells with inexpensive metal stairs.	Painted finished walls. Washrooms with mosaic tile flooring: ceramic wall tile, good quality ceiling tile; finished walls & soffits to stairwell: Precast conc. treads.
ELECTRICAL:	Average quality troffer type fluorescent fixtures with louvres. 2'0"x4'0" modules. 2 Watts per sq. ft.	Average quality troffer type fluorescent fixtures with louvres. 2'0"x4'0" modules. 2.5 Watts per sq. ft.	Average quality troffer type fluorescent fixtures with louvres. 1'0"x4'0" modules. 2.5 Watts per sq. ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Good quality fixtures.

MEDICAL-DENTAL BUILDINGS

CONST. CLASS 'B'

B - 8	B - 9	B - 10
Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.	Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.	Re. conc. wall below frost line, incl. wpfg., 1" rigid insul. to perimeter and footings.
6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Ledge rock with conc. block back-up and rigid insulation.	Indiana cut limestone with conc. block back-up and rigid insulation.	Polished granite with brick back-up and rigid insulation.
Thermo insul. plate. Alum. framed 40%.	Thermo insul. plate. Alum. framed 40%.	Thermo insul. plate. Alum. framed 40%.
2" Rigid insul. B.U. Roofing. Alum. Flashing.	2" Rigid insul. B.U. Roofing. Copper Flashing.	2" Rigid insul. B.U. Roofing. Copper Flashing.
Avg. quality carpeting.	Multi-coloured terrazzo	Select quality carpeting.
Avg. quality plywood panelling.	Plastic laminate wall panelling.	Select quality matched wood panelling.
Susp. acoustic metal pans.	Susp. metal lath and acoustical plaster.	Susp. acrylic plastic panels.
Painted finished walls Washrooms with mosaic tile flooring: ceramic wall tile. Good quality ceiling tile; Finished walls & soffits to stair-well; Precast conc. treads.	Painted finished walls Washrooms with terrazzo flooring: ceramic wall tile. Good quality ceiling tile; Finished walls & soffits to stair-well: Precast conc. treads.	Painted finished walls Washrooms with terrazzo flooring: ceramic wall tile. Good quality ceiling tile; Finished walls & soffits to stair-well: Precast conc. treads.
Good quality troffer type fluorescent fixtures with louvres. 1'0"x4'0" modules. 3 Watts per sq. ft.	Good quality troffer type fluorescent fixtures Acrylic shield. 1'0"x4'0" modules. 3.5 Watts per sq. ft.	Good quality troffer type fluorescent fixtures Acrylic shield. 2'0"x2'0" modules. 4 Watts per sq. ft.
Good quality fixtures.	Select quality fixtures.	Select quality fixtures.

S P E C I F I C A T I O N S F O R

CLASS SHAPE	B - 5	B - 6	B - 7
STRUCTURAL FRAMING:	Re. con. flat slab with drop panels.	Re. con. flat plate	Re. con. one way solid slab incl. beams.
Bay Size	Typical bays 20'0" x 20'0".	Typical bays 20'0" x 25'0".	Typical bays 20'0" x 30'0".

COST FACTORS

FIRST FLOOR RATES

(BASE 5,000 SQ.FT. - HEIGHT 14'0")

CLASS SHAPE	5	5½	6	6½	7	7½
A	15.85	16.90	17.90	19.50	21.05	22.50
B	16.70	17.80	18.80	20.45	22.10	23.65
C	17.50	18.60	19.70	21.45	23.20	24.80

SECOND FLOOR RATES

(BASE 5,000 SQ. FT. - HEIGHT 12'0")

A	12.65	13.50	14.30	15.60	16.85	18.00
B	13.35	14.25	15.05	16.35	17.65	18.90
C	14.00	14.85	15.75	17.15	18.55	19.85

STOREY ADJUSTMENT TABLE

3	4	5	6	7	8	9	10
1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

MEDICAL-DENTAL BUILDINGS

CONST. CLASS 'B'

B - 8	B - 9	B - 10
Re.con. two way solid slab incl. beams.	Re.con. two way joists (waffle flat slab)- dome formed.	Re.con. one way joists (waffle flat slab)- long pan formed.
Typical bays 20'0" x 30'0".	Typical bays 30'0" x 30'0".	Typical bays 30'0" x 40'0".

COST FACTORS

FIRST FLOOR RATES

(BASE 5,000 SQ.FT. - HEIGHT 14'-0") CONST. CLASS 'B'

8	8½	9	9½	10	CLASS SHAPE
23.95	25.55	27.15	28.80	30.50	A
25.15	26.80	28.50	30.25	31.95	B
26.35	28.10	29.80	31.70	33.55	C

SECOND FLOOR RATES

(BASE 5,000 SQ.FT. - HEIGHT 12'-0")

19.15	20.45	21.70	23.05	24.40	A
20.10	21.45	22.80	24.20	25.55	B
21.10	22.45	23.85	25.35	26.85	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000	12,000
1.20	1.10	1.05	1.00	0.97	0.95	0.94	0.92	0.91	0.90	0.89
12,000	14,000	16,000	18,000	20,000	25,000	30,000	35,000	40,000	50,000	60,000
0.89	0.87	0.86	0.85	0.84	0.83	0.81	0.80	0.79	0.78	0.77

S P E C I F I C A T I O N S F O R

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATIONS: (To Nat. Bldg. Code Stds.)	Conc. block walls below frost line, incl wpfg 1" rigid insul to perimeter & footings.	Conc. block walls below frost line, incl wpfg 1" rigid insul to perimeter & footings.	Re. conc. wall below frost line incl wpfg. 1" rigid insul to perimeter & footings.
FLOOR:	4" Re. conc slab on compacted fill.	4" Re. conc slab on compacted fill.	5" Re. conc slab on compacted fill.
EXTERIOR: MASONRY:	Conc block with stucco finish or ornate conc blk.	Clay facebrick with conc blk back-up & insul.	P.C.C. units with exposed common aggregate & some clay facebrick with conc. blk back-up, rigid insul.
GLAZING:	$\frac{1}{4}$ " Tempered plate steel framed 40%.	$\frac{1}{4}$ " Tempered plate steel framed 40%.	$\frac{1}{4}$ " Tempered plate alum framed 40%.
STRUCTURAL FRAMING:	Wooden joists or beams with T & G decking typical bays 15'0" x 15'0".	Open web steel joists metal decking, typical bays 20'0" x 25'0".	Open web steel joists metal decking, typical bays 20'0" x 30'0".
ROOF FINISH:	1" Rigid insul. B.U. roofing, G.I. flashing.	1" Rigid insul. B.U. roofing, G.I. flashing.	1 $\frac{1}{2}$ " Rigid Insul. B.U. roofing, G.I. flashing.
INTERIOR: FLOORING:	Vinyl Asbestos Tile.	Vinyl Asbestos Tile.	Rubber tile or select V.A.T.
WALLS	Drywall painted.	Drywall painted.	Drywall painted.
CEILING:	Perf. ac. tile applied to gypsum board or strapping.	Mineral ac. panels with exposed tee bar suspension.	Mineral ac. panels with exposed tee bar suspension.
CORE:	Painted conc. blk walls washrooms with V.A.T. low cost ceiling tile painted stairwells with inexpensive metal stairs.	Painted conc. blk walls washrooms with V.A.T. low cost ceiling tile painted stairwells with inexpensive metal stairs.	Painted conc. blk walls, washrooms with low cost ceiling tile painted stairwells with inexpensive metal stairs.

MEDICAL-DENTAL BUILDINGS

CONST. CLASS 'C'

C - 7	C - 8	C - 9	C - 10
Re. conc wall below frost line wpfg 1" rigid insul to perimeter & footings.	Re. conc wall below frost line wpfg 1" rigid insul to perimeter & footings.	Re. conc wall below frost line wpfg 1" rigid insul to perimeter & footings.	Re conc wall below frost line wpfg 1" rigid insul to perimeter & footings.
5" Re. conc slab on compacted fill.	6" Re. conc slab on compacted fill.	6" Re. conc slab on compacted fill.	6" Re. conc slab on compacted fill.
P.C.C. units with exposed common aggregate, rigid insul	Ledge rock with conc blk back-up rigid insul.	Cut limestone with conc. blk. back-up rigid insul.	Polished granite with brick back-up rigid insul.
$\frac{1}{4}$ " Tempered plate alum framed 40%.	Thermobreak insulated plate, alum framed 40%.	Thermobreak insulated plate, alum framed 40%.	Thermobreak insulated plate, alum framed 40%.
Open web steel joist metal decking, typical bays 20'0" x 30'0".	Beams & girders metal decking, typical bays 20'0" x 30'0".	Beams & girders metal decking typical bays 30'0" x 30'0".	Beams & girders metal decking typical bays 30'0" x 40'0".
1 $\frac{1}{2}$ " Rigid insul. B.U. roofing, G.I. flashg.	2" Rigid insul. B.U. roofing alum. flashg.	2" Rigid insul. B.U. roofing copper flashg.	2" Rigid insul. B.U. roofing copper flashg.
Rubber tile or select V.A.T.	Avg. quality carpeting.	Multi-coloured terrazzo.	Select quality carpeting.
Plaster painted.	Avg. quality plywood panelling.	Plastic laminate wall panelling.	Select quality match wood panelling.
Mineral ac. tile applied to metal suspension.	Susp. ac. metal pans	Susp. metal lath & acoustical plaster.	Susp. acrylic plastic panels.
Painted finished walls, washrooms with mosaic tile good quality ceiling tile, finished walls & soffits to stairwell, precast conc. treads.	Painted finished walls, washrooms with mosaic tile good quality ceiling tile, finished walls & soffits to stairwell, precast conc. treads.	Painted finished walls, washrooms with mosaic tile, good quality ceiling tile finished walls & soffits to stairwell, precast conc. treads.	Painted finished walls, washrooms with mosaic tile good quality ceiling finished walls & soffits to stairwell, precast conc. treads.

S P E C I F I C A T I O N S F O R

CLASS SHAPE	C - 4	C - 5	C - 6
ELECTRICAL:	Av. quality 96" 2 tube fluorescent fixtures with louvres. Surface mounted. 2 watts/sq. ft.	Av. quality troffer type fluorescent fixtures with louvres. 2'0"x4'0"modules. 2 watts/sq. ft.	Av. quality troffer type fluorescent fixtures with louvres. 2'0"x4'0"modules 2.5 watts/sq. ft.
PLUMBING:	Standard quality fixtures.	Standard quality fixtures.	Standard quality fixtures.

COST FACTORS

FIRST FLOOR RATES

(BASE 5,000 SQ.FT. - HEIGHT 14'0")

CLASS SHAPE	4	4½	5	5½	6	6½
A	12.50	13.80	15.10	16.35	17.60	19.15
B	13.15	14.50	15.90	17.15	18.45	20.15
C	13.80	15.15	16.60	17.95	19.35	21.05

SECOND FLOOR RATES

(BASE 5,000 SQ.FT. - HEIGHT 12'0")

A	10.05	11.10	12.10	13.10	14.10	15.35
B	10.45	11.50	12.55	13.60	14.65	15.90
C	10.85	11.95	13.10	14.15	15.15	16.55

STOREY ADJUSTMENT TABLE

3	4	5	6	7	8	9	10
1.01	1.01	1.02	1.02	1.03	1.04	1.05	1.06

HEIGHT ADJUSTMENT: 2% for each foot of variation in wall height.

MEDICAL-DENTAL BUILDINGS

CONST. CLASS 'C'

C - 7	C - 8	C - 9	C - 10
Good quality troffer type fluorescent fixtures with louvres. 1'0"x4'0" modules 2.5 watts/sq.ft.	Good quality troffer type fluorescent fixtures with louvres. 1'0"x4'0" modules 3 watts/sq.ft.	Good quality troffer type fluorescent fixtures. Acrylic Shield 1'0"x4'0" modules 3.5 watts/sq.ft.	Good quality troffer type fluorescent fixtures. Acrylic Shield 2'0" modules. 4 watts/sq.ft.
Good quality fixtures.	Good quality fixtures.	Select quality fixtures.	Select quality fixtures.

COST FACTORSFIRST FLOOR RATES

(BASE 5,000 SQ.FT., HEIGHT 14'0")

CONST. CLASS 'C'

7	7½	8	8½	9	9½	10	CLASS SHAPE
20.80	22.20	23.65	25.50	27.40	29.50	31.55	A
21.80	23.30	24.80	26.80	28.80	30.95	33.15	B
22.85	25.15	26.05	28.05	30.15	32.45	34.75	C

SECOND FLOOR RATES

(BASE 5,000 SQ.FT., HEIGHT 12'0")

16.60	18.05	19.50	21.25	23.05	24.75	26.50	A
17.25	18.75	20.25	22.10	23.95	25.75	27.55	B
17.95	19.50	21.05	22.90	24.90	26.70	28.60	C

AREA ADJUSTMENT TABLE

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000	12,000
1.20	1.10	1.05	1.00	0.97	0.95	0.94	0.92	0.91	0.90	0.89
12,000	14,000	16,000	18,000	20,000	25,000	30,000	35,000	40,000	50,000	60,000
0.89	0.87	0.86	0.85	0.84	0.83	0.81	0.80	0.79	0.78	0.77

MEDICAL-DENTAL BUILDINGS

DESCRIPTION:- The following square foot cost factors are related to an unfinished reinforced concrete structures with concrete floor (6" thick or more), minimum lighting and drainage.

BASEMENT - COST FACTORS
(BASE 5,000 SQ.FT. - HEIGHT 10'-0") CONST. CLASS 'B'

SHAPE	1ST LEVEL (BASEMENT)	2ND LEVEL (SUB-BASEMENT)	3RD LEVEL (SUB-SUB-BSM'T)
"A"	6.95	7.60	7.10
"B"	7.25	7.85	7.35
"C"	7.45	8.10	7.55

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.08	1.06	1.04	1.02	1.00	0.98	0.95	0.93
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
0.93	0.92	0.90	0.88	0.85	0.82	0.80	0.79

BASEMENT -- COST FACTORS
(BASE 5,000 SQ. FT. - HEIGHT 10-0") CONST. CLASS 'C'

SHAPE	1ST LEVEL (BASEMENT)	2ND LEVEL (SUB-BASEMENT)	3RD LEVEL (SUB-SUB-BSM'T)
"A"	6.10	6.75	6.25
"B"	6.35	7.00	6.50
"C"	6.60	7.25	6.70

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
1.17	1.08	1.05	1.02	1.00	0.98	0.95	0.93
10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
0.93	0.92	0.89	0.87	0.83	0.81	0.78	0.76

ADJUSTMENTS: 10% for each foot of wall height variation.
 Conc. susp. slab on metal pan deduct 70¢ per S.F.
 Steel Struct. concrete fire proofed Add 0.75 per S.F.
 Steel Struct. Fireproofed with sprayed asbestos Add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

MEDICAL-DENTAL BUILDINGS

FINISHED BASEMENT SPECIFICATIONS

ADDITIVES TO UNFINISHED BASEMENTS

TYPE COMPONENTS	I	II	III
FLOOR FINISHES:	Vinyl Asbestos Tile.	Terrazzo Tile.	Quarry Tile.
WALL FINISHES:	Painted walls and columns.	Painted plaster walls incl. furred columns.	Vinyl covered finished walls incl. furred cols.
CEILING FINISHES:	Fiberglass panels with Tee Bar Susp.	Mineral acoustic with Tee Bar Susp.	Susp. Mineral acoustic Tile.
ELECTRICAL:	Avge. quality 48" 2 tube Fluorescent Fixtures. Surface mounted. 2 watts/sq. ft.	Avge. quality 1'0" x 4'0". Troffer Fluorescent Fixtures. 2 watts/sq. ft.	Good Quality 1'0" x 4'0". Troffer Fluorescent Fixtures. 2 watts/sq. ft.
PLUMBING:	Standard quality Fixtures.	Standard Quality Fixtures.	Good Quality Fixtures.

COST FACTORS

AREA TYPE	1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000
I	3.40	3.30	3.25	3.20	3.20	3.15	3.15	3.10
II	5.50	5.35	5.15	4.95	4.85	4.80	4.65	4.55
III	7.40	7.20	7.00	6.85	6.70	6.65	6.45	6.40

AREA TYPE	10,000	12,000	16,000	20,000	30,000	40,000	60,000	80,000
I	3.10	3.10	3.05	3.00	2.95	2.90	2.80	2.75
II	4.55	4.50	4.35	4.20	4.05	3.95	3.70	3.40
III	6.40	6.30	6.15	6.10	5.90	5.75	5.50	5.30

HEIGHT ADJUSTMENT: 1% for each foot of wall height over 9'0".

PARKING GARAGES-CLASS 'B'

DESCRIPTION:- The following square foot cost factors are related to an unfinished reinf. concrete structures with concrete floor (6" thick or more), minimum lighting and drainage.

COST FACTORS
(BASE 5,000 SQ. FT.- HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	7.00	7.70	7.20
"B"	7.30	7.95	7.40
"C"	7.50	8.20	7.65

AREA ADJUSTMENT TABLE

3,000	4,000	5,000	7,000	9,000	10,000	12,000
1.10	1.05	1.00	0.97	0.93	0.92	0.91
12,000	15,000	20,000	25,000	30,000	35,000	40,000
0.91	0.90	0.87	0.86	0.85	0.84	0.82

EXTENDED BASEMENT PARKINGCOST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	9.50	7.70	7.20
"B"	10.30	7.95	7.35
"C"	10.15	8.20	7.60

ADJUSTMENTS: 10% for each foot of wall height variation.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

PARKING GARAGES - CLASS 'C'

DESCRIPTION:- The following square foot cost factors are related to steel structures with concrete floors (6" thick or more), minimum lighting and drainage.

COST FACTORS
(BASE 5,000 SQ. FT. - HEIGHT 10'-0")

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	5.95	6.55	6.05
"B"	6.20	6.80	6.30
"C"	6.40	7.00	6.50

AREA ADJUSTMENT TABLE

3,000	4,000	5,000	7,000	9,000	10,000	12,000
1.10	1.05	1.00	0.97	0.93	0.92	0.90
12,000	15,000	20,000	25,000	30,000	35,000	40,000
0.90	0.89	0.85	0.84	0.82	0.81	0.80

EXTENDED BASEMENT PARKING
COST FACTORS

SHAPE	1ST LEVEL (Basement)	2ND LEVEL (Sub-basement)	3RD LEVEL (Sub-sub-basement)
"A"	8.50	6.55	6.05
"B"	9.30	6.80	6.30
"C"	9.10	7.00	6.50

ADJUSTMENTS: 10% for each foot of wall variation. Conc. susp. slab on metal pan deduct 70¢ per S.F. Steel Struct. concrete fire proofed add 0.75¢ per S.F. Steel Struct. fireproofed with sprayed asbestos add .60¢ per S.F.

NOTE: Cost factors do not include heating, air conditioning, partitions, sprinklers or finished plumbing units.

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
I	CLAY TILE - Painted.				
	LOW COST PLYWOOD - Painted or prefinished, wood framed.				
	LOW COST PLYWOOD PARTIALLY GLAZED - Painted or prefinished, Wood framed.				
	HARDBOARD - Prefinished on wooden studs.	\$3.00	\$1.50	\$1.05	\$0.75
II	PLASTER ON LATH - Painted, wood or metal studs				
	SOLID PLASTER - Painted, furred.				
	CONCRETE BLOCK - Painted, incl.				
	DECOR BLOCK, SHADOW BLOCK - etc.				
	DRYWALL - Painted, or wooden studs.	4.00	2.00	1.35	1.00
III	PLASTER - Painted, on clay tile.				
	GLAZED - Conc. block or tile.				
	DRYWALL, VINYL COVERED - Wood or metal studs.				
	DRYWALL PANELS - Painted, metal framed.				
	DRYWALL PANELS PARTIALLY GLAZED - Painted, metal framed.				
	DRYWALL, VINYL COVERED - metal framed.	5.00	2.50	1.65	1.25

HEIGHT ADJUSTMENT: Allow 10% for each foot of wall height variation.

Ratios are based on the proportion of one linear foot of partitioning to the net square footage of floor area.

The above cost factors take into consideration the usual number of doors required for average office installation.

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
IV	GOOD QUALITY PLYWOOD, PARTIALLY GLAZED - Rubbed or prefinished, wood or metal studs.				
	DRYWALL - VINYL COVERED, PARTIALLY GLAZED - Metal Framed				
	ACCORDIAN TYPE, VINYL FABRIC - Wood or steel framed.				
	SELECT QUALITY WOOD PANELLING - Rubbed or prefinished, wood or metal studs.				
	PLASTER - Painted, on conc. block.				
V	GOOD QUALITY PLYWOOD - Rubbed or prefinished, wood or metal studs.	\$6.00	\$3.00	\$2.00	\$1.50
	FULLY GLAZED - Metal Framed.				
	METAL PANELS, PARTIALLY GLAZED - Painted, Metal Framed.				
VI	METAL PANELS - Painted, Metal Framed.	7.00	3.50	2.35	1.75
	PLASTIC LAMINATE PANELS - Wood or metal studs.				
	PLASTIC LAMINATE PANELS - Metal Framed.				
VII	PLASTIC LAMINATE PANELS, PARTIALLY GLAZED - Metal Framed.	9.20	4.60	3.10	2.30
	EXTRUDED ALUM. FRAMED & PLATE GLASS - (Clear, patterned, or Georgian wire)	12.00	6.00	4.00	3.00
MISC.	POLISHED MARBLE OR GRANITE With masonry back-up.	24.00	12.00	8.00	6.00

MEDICAL-DENTAL BUILDINGS

HEATING, AND COOLING SYSTEMS

SYSTEMS	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVE.	GOOD	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$0.80	\$0.95	\$1.10	\$1.30
	Forced Air (with ducts) Baseboard (Hot Water or Electrical)	0.80	0.95	1.10	1.30
COOLING SYS.	Induction units.	1.50	1.75	2.00	2.50
	Refrigerated Type	1.25	1.40	1.70	2.00
	Evaporative Type	0.80	0.95	1.10	1.30
COMBINED	Hot and Chilled Water(Zoned)	2.75	3.25	3.75	4.25
	Warm and Cooled Air (Zoned)	2.50	3.00	3.25	3.75

HEIGHT ADJUSTMENT: 3% for each foot of wall height over 15'0".

NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).

SPRINKLERS

COST FACTORS

BUILDING AREA IN SQ. FT.	SYSTEM TYPE	TYPE OF INSTALLATION	
		OPEN	CONCEALED
2,000 to 4,000	Wet or Dry	\$0.55	\$0.60
4,000 to 6,000	Wet or Dry	0.50	0.55
6,000 to 8,000	Wet or Dry	0.45	0.45
8,000 to 10,000	Wet or Dry	0.40	0.45
10,000 to 20,000	Wet or Dry	0.35	0.40
20,000 And Up	Wet or Dry	0.30	0.35

NOTE: Above Square Foot Cost Factors to be applied against the total sprinklered floor area. (exterior measurements).

ADDITIVES

PASSENGER ELEVATORS
SELECTIVE COLLECTIVE

SPEED (FT. PER MIN.)	C A P A C I T Y		ADDITIONAL COST PER STOP
	1500 lbs.	2000 lbs.	
100	\$11,750	\$12,250	+ \$1350
150	\$14,500	\$15,000	+ \$1600

FULLY AUTOMATIC

SPEED (FT. PER MIN.)	C A P A C I T Y				ADDITIONAL COST PER STOP INCL. POWER DRS.
	2500 lbs.	3000 lbs.	3500 lbs.	4000 lbs.	
200	\$ 25,000	\$ 27,000	\$ 29,000	\$ 31,000	+ \$1600
300	33,000	35,000	36,500	38,000	+ 1650
350	36,000	38,000	40,000	42,000	+ 1700
400	41,000	43,000	45,000	47,000	+ 1800
500	50,000	52,000	53,500	55,000	+ 2000
600	59,000	62,000	65,000	68,000	+ 2000
700	69,000	72,000	75,000	78,000	+ 2100
800	80,000	83,000	86,000	89,000	+ 2200
1000	98,000	101,000	104,000	107,000	+ 2200
1200	118,000	122,000	126,000	130,000	+ 2300

NOTE: To compute the cost of passenger elevators, the base cost is determined by the capacity and speed. To arrive at a total cost, the suggested cost per stop, multiplied by the number of stops must be added to the base cost. For those floors which are bypassed by an express elevator apply a bypass cost of \$650. per floor.

ESCALATORS

24" Width .. Per foot Lift	\$2000	--	\$2500
32" Width .. Per foot Lift	2500	--	3000
48" Width .. Per foot Lift	3000	--	4000

ADDITIVES

FREIGHT ELEVATORS

To compute the cost of freight elevators, the base cost per shaft is determined by the capacity and speed of the unit. In addition to the cost per stops, other variables set out below must be considered in arriving at the total cost.

ELECTRIC FREIGHT ELEVATORS (VARIABLE VOLTAGE GEARED)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$17,900	\$19,050	\$22,400	\$26,900	\$31,500
Add per stop	1,680	1,730	1,850	1,960	2,010

RATES INCLUDE: Cost of single automatic control system and levelling device.
ADD: \$1200. per shaft for selective-collective operation.

ELECTRIC FREIGHT ELEVATORS (A.C. RHEOSTATIC CONTROL - SINGLE AUTOMATIC)

SPEED	CAPACITY				
	1,500 lbs	3,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs
150 FPM	\$10,300	\$11,800	\$15,700	\$18,300	\$20,600
Add per stop	1,500	1,550	1,625	1,725	1,800
100 FPM	9,000	10,300	13,900	15,800	17,500
Add per stop	1,400	1,450	1,500	1,575	1,625
50 FPM	8,050	9,000	12,000	13,700	15,300
Add per stop	1,350	1,400	1,450	1,500	1,550

ADD FOR:

- Selective-collective operation - \$1300
- Automatic levelling device - 1800
- Rear doors add \$1400 for the first opening and \$900 for each additional opening.
- Power operation of doors, add \$2700 for the front or rear door, and \$600 for each additional front or rear door.

HYDRAULIC ELEVATORS

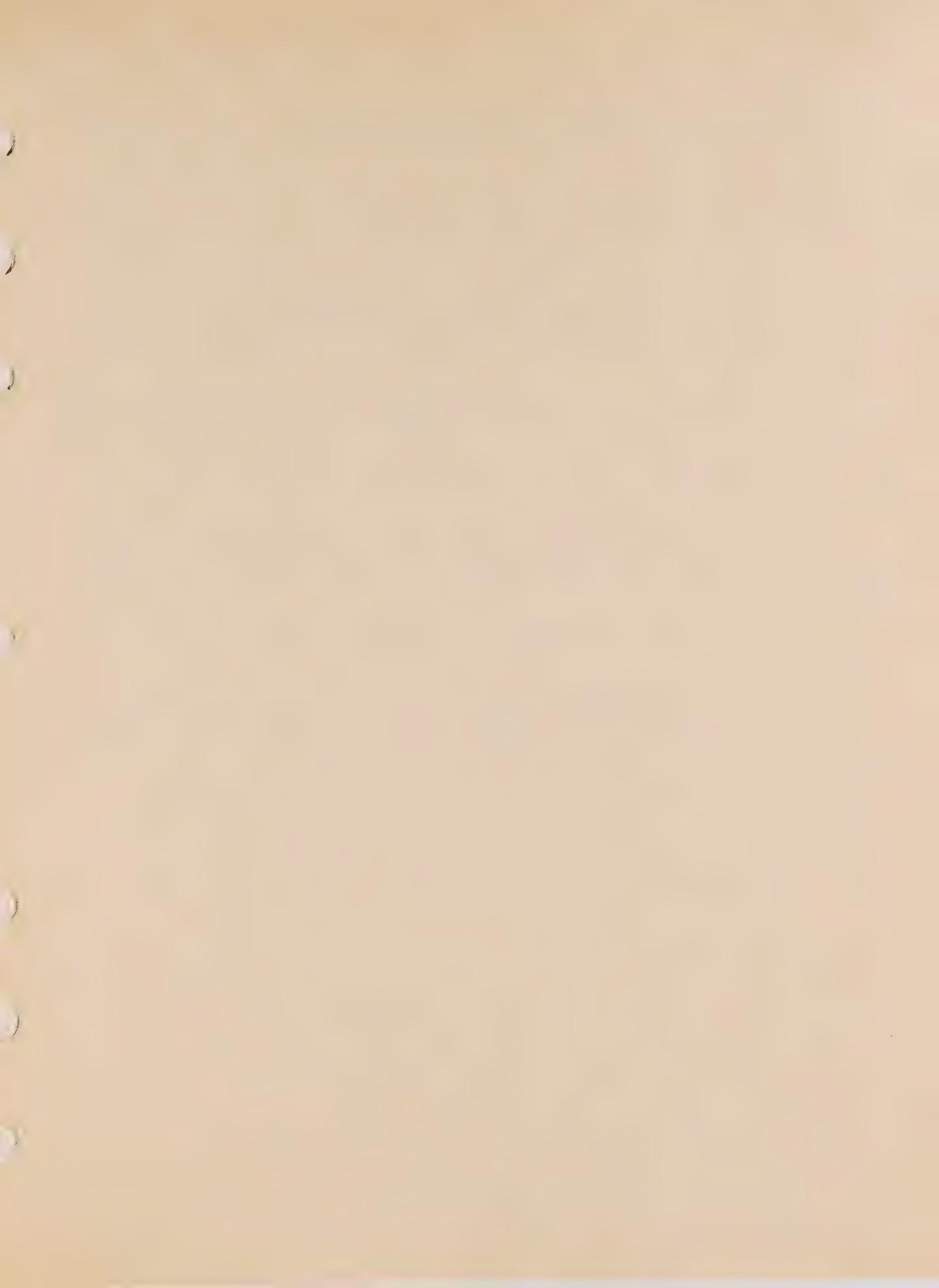
The base cost per shaft is 80% of the cost of A.C. rheostatic elevators of comparable speed and capacity. All costs per stop and variations of controls are 100% of the cost of comparable A.C. rheostatic elevator.

SIDEWALK ELEVATORS

Including sidewalk doors - \$8,000 - \$11,000 each

ELECTRIC DUMBWAITERS

Cost per shaft - \$4,000 Add cost per stop - \$700





ASSEMBLY HALLS

GENERAL COMMENTS

The following are the Specifications and Cost Factors for Assembly Halls and are set out in D-Class and C-Class designations. The C-Class are load-bearing with a cost factor to be added to allow for steel framed structures.

The Cost Factors do not include partitions however, an allowance has been included for the Washroom Area including the finishes generally found within this area.

Additives such as kitchen cupboards can be found in the Residential in-place costs.

The basic plumbing as required under the Provincial Code has been included with the exception of the Class 3 in the C and D types of construction. Kitchen sinks and janitor sinks if found should be treated as additives.

Partitions based on a ratio basis form part of the additives in this section and are based on 10 feet basic height.

Where a percentage factor is given in the Specifications referring to exterior walls, we anticipate for example that the front wall and possibly part of the side walls have a different type of masonry or stone finish from the remainder of the perimeter.

The Specifications and Cost Factors included in this section are based on information developed from a base year of 1969.

For basement Cost Factors see Section 5C - Page 7.

S P E C I F I C A T I O N S F O R

CLASS	D - 3	D - 4	D - 5
FOUNDATION	Pressure Treated Cedar Mudsills or equiv. in Piers.	8" Masonry or Poured conc. Walls & Footings below frost line.	8"-10" Masonry or Poured conc. Walls & Footings below frost line.
FLOOR	2"x8" Wood Joists 24" o.c. or equiv. 1 x 4 sub-flooring or equiv. some beams.	2"x8" Wood Joists 16" o.c. or equiv. utility grade sub-flooring some beams.	2"x8" Wood Joists 16" o.c., 1" const. grade sub-flooring, some beams.
STRUCTURAL FRAMING	2"x12" Wood Rafters 24" o.c. or equiv. in trusses.	2"x12" Wood Rafters 24" o.c. or equiv. in trusses.	2"x12" Wood Rafters 24" o.c. or equiv. in wood trusses.
EXTERIOR WALLS	2"x4" Stud Frame 24" o.c. utility grade wood siding or equiv.	2"x4" Stud Frame 16" o.c. utility grade wood sheathing insulation bevel siding or equiv.	2"x4" Stud Frame 16" o.c. insulation, sheathing board stucco or equiv. in alum. siding or brick veneer
ROOF & ROOFING	Low cost plywood, sheathing, rolled roofing or equiv.	Utility grade roof sheathing low quality shingles	Const. grade roof sheathing 210# asph. shingle roofing.
DOORS & WINDOWS	Low quality wood doors Low quality wood wdw.	Hollow Core slab doors dbl. hung wood frame windows	Hollow core slab doors dbl. hung windows
INTERIOR FINISH FLOOR	Painted	Economy lino or equiv.	Vinyl asb. tile plywood underlay
WALLS	Fibreboard painted or equiv.	Painted plaster board or equiv.	Drywall plaster coat painted.
CEILING	Fibreboard painted or equiv.	Painted plasterboard or equiv.	Drywall plaster finish painted.
PLUMBING & WASH-ROOM FINISHES	Nil	Economy grd. fixtures per Nat.Bldg.Code lino fl. painted pl. board walls and ceiling.	Std. fixtures as per Nat.Bldg.Code low cost vinyl asb.fl. tile painted drywall walls and ceiling.
ELECTRICAL	Minimum number of outlets.	Minimum number of low cost incandescent fixtures.	Adequate number of good quality incandescent fixtures.

ASSEMBLY HALLS

CONST. CLASS 'D'

D - 6	D - 7	D - 8	D - 9
10"-12" Masonry or Poured conc. Walls & Footings below frost line or equiv.	10"-12" Masonry or Poured conc. Walls & Footings below frost line or equiv.	12" Masonry or Poured conc. Walls & Footings below frost line or equiv.	12" Masonry or Poured conc. Walls & Footings below frost line or equiv.
2"x10" Wood Joists 16" o.c., 1"x8" const. grade sub-flooring, some beams.	2"x10" Wood Joists 16" o.c., 1"x8" const. grade sub-flooring, some beams.	2"x10" Wood Joists 12" o.c., 2"x10" const. grade sub-flooring, some beams.	2"x12" Wood Joists 12" o.c., 2" const. grade sub-flooring some beams
2"x12" Wood Rafters 24" o.c. or equiv. in wood trusses.	2"x12" Wood Rafters 24" o.c. or equiv. in wood trusses.	2"x12" Wood Rafters 16" o.c. or equiv. in wood trusses.	2"x12" Wood Rafters 16" o.c. or equiv. in wood trusses and laminated timbers.
2"x4" Stud Frame 16" o.c. insulation, sheathing, average quality clay brk. veneer or alum.siding veneer.	2"x4" Stud Frame 16" o.c. insulation, 75% good clay brick veneer, 25% ledge rock	2"x6" Wood Stud Frame 16" o.c. insulation & sheathing board, 50% clay brick veneer, 50% ledge rock veneer	2"x6" Wood Stud Frame 16" o.c. insul. sheathing board, select stone veneers Gen.good architecture
Const. grade roof sheathing 210# asph. shingle roofing.	Const. grade roof sheathing 210# asph. shingles or equiv.	Select sheathing good quality fire resistive cedar shingles or equiv.	1"x8" Select sheathing clay fired tile or equiv.
Hollow core slab doors dbl. hung windows or equiv.	Ornamental entrance doors good double hung windows.	Ornamental entrance doors good double hung windows.	Custom designed doors select dbl. hung & glz. wdw.
Hwd. or good quality V.A. tile	Hardwood some vinyl tile or equiv.	Good quality hwd. some vinyl & trzo. or equiv.	Select matching hwd. some marble trzo. or equiv.
Drywall pl. coat painted or equiv.	2 coat pl. painted or equiv. some wood panl.	Good plaster or equiv in panelling.	Select quality pl. panelling.
Drywall pl. coat painted or equiv.	2 coat pl. painted some acoustic tile or equiv.	Good acoustic tile or equiv. in plaster painted.	Select pl. painted or select oak boards.
Std. fixtures as per Nat.Bldg.Code V.A. tile some cer. walls drywall walls and ceiling.	Good fixtures as per Nat.Bldg.Code good V.A. tile pl. walls and ceiling 2/3 cer.	Select fixtures as per Nat.Bldg.Code trzo. fl. pl. walls & ceiling partial cer. finish.	Custom fixtures as per Nat.Bldg.Code marble fl. pl. walls & ceiling full cer.
Average quality fluor. fixtures adequate outlets.	Good fluorescent recessed or equiv. adequate outlets.	Select recessed fluor or spotlight fixtures many outlets.	Select or custom recessed spotlight & fluor. fixtures many outlets.

CLASS SHAPE	C - 3	C - 4	C - 5
FOUNDATION	8" Masonry or poured conc. walls & footing below frost line.	8" Masonry or poured conc. walls & footing below frost line	10" Masonry or poured conc. walls & footing below frost line.
FLOOR	4" conc. slab on grade granular fill.	4" conc. slab on grade granular fill..	4" conc. slab on grade granular fill.
STRUCTURAL FRAMING	Open web or long span steel joists load-bearing some beams.	Open web or long span steel joists load-bearing some beams.	Open web or long span steel joists load-bearing some beams.
EXTERIOR WALLS	8" conc. blk. or equiv.	8" conc. blk. & stucco to side & rear walls 4" conc. blk. back-up to front wall or equiv.	10" conc. blk. & stucco to side & rear walls 4" conc. blk. back-up to front wall or equiv.
ROOF & ROOFING	Steel deck $\frac{1}{2}$ " rigid insul 3 ply roofing G.I. flashing.	Steel deck $\frac{1}{2}$ " rigid insul 3 ply roofing G.I. flashing.	Steel deck 1" rigid insul 4 ply roofing G.I. flashing.
DOORS & WINDOWS	Hollow metal doors wood sash windows.	Hollow metal doors wood sash windows.	Hollow metal doors good entrance door steel sash windows or equiv.
INTERIOR FINISHES FLOOR	Painted	Inlaid lino or equiv.	Vinyl asbestos tile.
WALLS	Painted	Fibreboard sheathing.	Drywall painted.
CEILING	Painted Roof deck.	Low cost fibreboard tile.	Low cost acoustic tile.
PLUMBING AND WASHROOM FINISHES	Nil.	Economy grd. fixtures lino fl. fibreboard lined walls low cost tile ceiling.	Standard grd. fixtures V.A. fl. dwl. to walls and ceilings.
ELECTRICAL	Minimum number of outlets.	Minimum number of low cost incadescent fixtures.	Adequate number of good quality incandescent fixtures.

ASSEMBLY HALLS

SECTION 9C PAGE A-15

BASE YEAR 1969

CONST. CLASS 'D'

C - 6	C - 7	C - 8	C - 9
10" Masonry or poured conc. walls & footing below frost line.	12" Masonry or poured conc. walls & footing below frost line.	12" Masonry or poured conc. walls & footing below frost line.	12" Masonry or poured conc. walls & footing below frost line.
5" conc. slab on mesh & gravel fill.	5" conc. slab on mesh & gravel fill.	5" conc. slab on mesh & gravel fill.	5" conc. slab on mesh & gravel fill.
Open web or long span steel joists load-bearing some beams.	Open web or long span steel joists load-bearing some beams.	Open web or long span steel joists load-bearing some beams.	Open web or long span steel joists load-bearing some beams.
Avg. quality 4" face br. with 6" conc. blk. back-up to ext. walls.	Good quality 4" face br. with 8" conc. blk. back-up to ext. walls.	Good quality 4" face br. with 8" conc. blk. back-up to side & rear walls good quality P.C.C. panel to front wall.	Good quality P.C.C. panels bush hammer finish, some aggregate finish to front wall or equiv.
Steel deck 1½" rigid insul 4 ply roofing G.I. flashing	Steel deck 1"-2" insul 4 ply roofing Alum. flashing.	Steel deck 2" rigid insul 4 ply roofing Alum. flashing or equiv.	Steel deck 2" rigid insul 4 ply roofing copper flashing or equiv.
Hollow metal doors good entrance door steel sash windows or equiv.	Hollow metal exit dr. extruded alum. entrance dbl. glz. alum. window	H.M. exit dr. anodized alum. entrance alum. frame dbl. glz. window.	Good quality H.M. dr. glz. stainless stl. entrance dr. anodized alum. fr. double window.
Good quality V.A.T. or equiv.	Hardwood with some good V.A.T.	Good quality matching hwd. some V.A.T.	Select quality hwd. some quarry & vinyl tile or equiv.
Drywall plaster coat painted.	2 coat pl. painted some good panl.	2 coat pl. some vinyl finish & select panl.	Decorative pl. vinyl finish select wood panl.
Avg. cost susp. acoustic tile.	Good quality susp. ac. tile or equiv.	Good quality susp. ac. tile or equiv.	Select quality susp. ac. tile.
Standard grd. fixtures V.A.T. dwl. some cer. finish.	Good quality fixture cer. tile fl. pl. walls cer. fin. 2/3 pl. ceiling.	Select quality fixtures quarry tile fl. pl. walls full cer. pl. ceiling.	Select quality fixtures marble fl. pl. walls marble dado pl. Ceiling.
Average quality fluor. fixtures adequate outlets.	Good quality recessed fluor. fixtures adequate outlets.	Select quality recessed fluor. & spotlight fixtures many outlets.	Select quality recessed fluor. & spotlight fixtures many outlets.

ASSEMBLY HALLS

COST FACTORS

(BASE 3,000 SQ. FT. -- HEIGHT 14'0")

CONST. CLASS 'D'

CLASS COMPONENTS \	D - 3	D - 4	D - 5	D - 6	D - 7	D - 8	D - 9
A	4.30	9.25	10.35	12.25	14.85	19.80	25.95
B	4.50	9.70	10.85	12.85	15.60	20.80	27.20
C	4.75	10.15	11.35	13.45	16.35	21.75	28.50

AREA ADJUSTMENT TABLE

600	800	1000	1200	1400	1600	2000	2400
1.46	1.35	1.27	1.21	1.18	1.14	1.09	1.05
3000	3600	4000	4400	4800	5200	5600	6000
1.00	.97	.95	.93	.92	.91	.90	.89

HEIGHT ADJUSTMENT: 3% for each foot of variation in wall height.

SECOND STOREY: Cost Factors may be obtained by applying 80% of the first storey rates.

NOTE: The above Cost Factors do not include heating, air-conditioning, sprinklers, kitchen plumbing, or partitions.

ASSEMBLY HALLS

COST FACTORSLOAD - BEARING
(BASE 3,000 SQ.FT. - HEIGHT 14'-0")

CONST. CLASS 'C'

CLASS COMPONENTS \ CLASS	C - 3	C - 4	C - 5	C - 7	C - 8	C - 9	C - 10
A	6.35	10.30	11.50	13.85	16.25	18.15	24.90
B	6.65	10.80	12.05	14.55	17.05	19.05	26.15
C	7.00	11.35	12.65	15.25	17.90	19.95	27.40

AREA ADJUSTMENT TABLE

600	800	1000	1200	1400	1600	2000	2400
1.52	1.39	1.30	1.24	1.20	1.15	1.10	1.05
3000	3600	4000	4400	4800	5200	5600	6000
1.00	.96	.94	.92	.91	.90	.89	.88

HEIGHT ADJUSTMENT: 3% for each foot of variation in wall height.SECOND STOREY: Cost Factors may be obtained by applying 80% of the First Storey rates.

NOTE: The above Cost Factors do not include heating, air-conditioning, sprinklers, kitchen plumbing, or partitions.

When structure has steel frame add .70¢ to above cost factors before adjustment.

A D D I T I V E S

HEATING, AIR CONDITIONING AND VENTILATION

ITEM	DESCRIPTION	COST PER SQ. FT.			
		LOW	AVG.	GOOD	EXCELLENT
HEATING	Hot Water Forced Air (with ducts) Hot Water convector or radiator.	1.00	1.15	1.25	1.50
COOLING SYS.	Refrigerated Air Conditioning	2.00	2.50	3.00	3.50
VENTILATION	Ventilation.	.25	.30	.35	.45

HEIGHT ADJUSTMENT: 3% PER FOOT OF VARIATION IN HEIGHT OVER 15'

MEZZANINE FLOOR -- COST FACTORS

DESCRIPTION	COST PER SQ. FT.
2½" - 3" Reinf. conc. on metal pans. Stl. Frame or 5" - 6" Reinf. conc. on Stl. frame.	\$3.00
8" Pre-cast conc. slab on Stl. frame.	\$4.00
6" Pre-cast conc. slab on Stl. frame.	\$3.25

STAGE -- COST FACTORS

DESCRIPTION	COST PER SQ. FT.
4' high hardwood stage on built up wood frame.	\$3.40
Hardwood stage on wood sleepers.	\$1.40
Steel grating. Prop hoist gallery.	\$5.60

BALCONY -- COST FACTORS

DESCRIPTION	COST PER SQ. FT.
Elevated reinf. conc. stepped 14" high. Painted Susp. metal lath & plaster soffit. Balcony rail	\$8.35
Elevated reinf. conc. stepped 18" high. Painted Susp. metal lath & plaster soffit. Balcony rail	\$9.00
Elevated wood framed stepped 14" high. Plywood sheathed. Susp. metal lath & plaster soffit. Balcony rail	\$7.10

NOTE: FOR CANOPIES REFER TO SECTION 1C PAGE 21

ADDITIVES

PARTITIONS

(BASE HEIGHT 10'-0")

GROUP	DESCRIPTION	RATIO			
		1:5	1:10	1:15	1:20
I	CLAY TILE - Painted.				
	LOW COST PLYWOOD - Painted or prefinished, wood framed.				
	LOW COST PLYWOOD PARTIALLY GLAZED - Painted or prefinished, Wood framed.				
	HARDBOARD - Prefinished on wooden studs.	\$3.00	\$1.50	\$1.05	\$0.75
II	PLASTER ON LATH - Painted, wood or metal studs				
	SOLID PLASTER - Painted, furred.				
	CONCRETE BLOCK - Painted, incl.				
	DECOR BLOCK, SHADOW BLOCK - etc.				
	DRYWALL - Painted, or wooden studs.	4.00	2.00	1.35	1.00
III	PLASTER - Painted, on clay tile.				
	GLAZED - Conc. block or tile.				
	DRYWALL, VINYL COVERED - Wood or metal studs.				
	DRYWALL PANELS - Painted, metal framed.				
	DRYWALL PANELS PARTIALLY GLAZED - Painted, metal framed.				
	DRYWALL, VINYL COVERED - metal framed.	5.00	2.50	1.65	1.25

HEIGHT ADJUSTMENT: Allow 10% foot of height variation.

Ratios are based on the proportion of one linear foot of partitioning to the net square footage of floor area.

The above cost factors take into consideration the usual number of doors required for average installation.

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Base Year 1969

BILLBOARDS & SIGNS

General Comments

This section comprises outdoor advertising poster panels, billboards, bulletin boards, trivision panels and spectaculars used to earn rental income.

The descriptions employed are those advocated by the Outdoor Advertising Association of Canada.

Many boards being erected to-day have a 3'0" wide apron below the lower edge of the advertising panel and this apron should be ignored when calculating areas.

Where boards have "cut-outs" the areas extending beyond the normal rectangular board should also be ignored when calculating areas.

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BILLBOARDS AND SIGNS

DETAILS	TYPE I	TYPE II	TYPE III	TYPE IV
DESCRIPTION	POSTER PANEL OR BILLBOARD	PAINTED BULLETIN BOARD	BULLETIN TRIO OR TRI-VISION	NEON ELECTRICAL SPECTACULAR
Width generally	20' to 25' 8' to 10'	40' to 50' 10' to 14'	25' to 50' 12' to 16'	25' to 100' 10' to 50'
Height "				
Specifications	Plywood or metal with wood or metal trim and posted copy	Metal or wood with painted or posted copy	Rotating triangular metal louvres displaying separate messages on each face with painted copy and may have embellishment in plastic or metal letters	Metal with metal trim. Custom design for impressive day-time and spectacular night-time effects
Supports	-----	-----	Steel or wood or concrete	-----
Location	-----	-----	On ground or wall or roof	-----
Cost per sq. ft.	\$2.15	\$4.00	\$9.00*	\$12.00
Add for illumination	\$0.50	\$1.00	nil	nil
Depreciation	-----	-----	50 percent after one year	-----

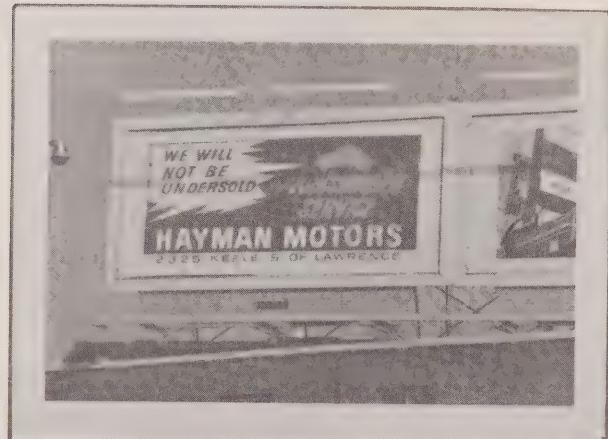
NOTE: NO ADJUSTMENT REQUIRED FOR AREA OR HEIGHT - DIMENSIONS SHOWN REPRESENT NORMAL CONSTRUCTION
 * MEASURED ONE FACE ONLY

Revised Oct. 1973



Wood Sections
Paper Posted
Ground Location

Wood Sections
Paper Posted
Roof Location



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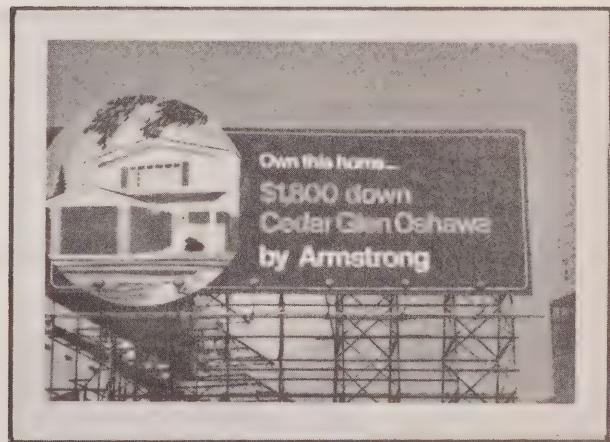
TYPE II - PAINTED BULLETIN BOARD.

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Standard Metal Sections
Painted Copy

Standard Metal Sections
Wood Cut-Outs
Painted Copy



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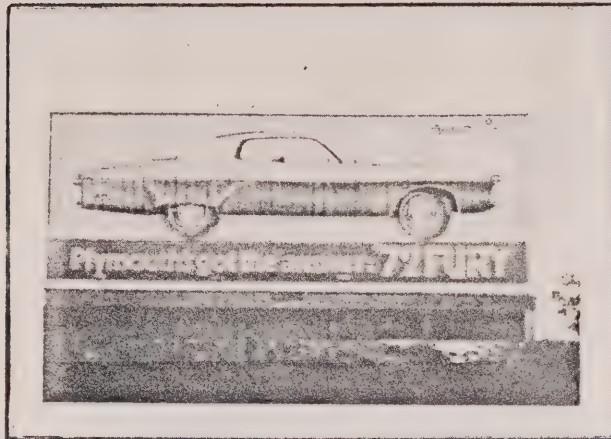
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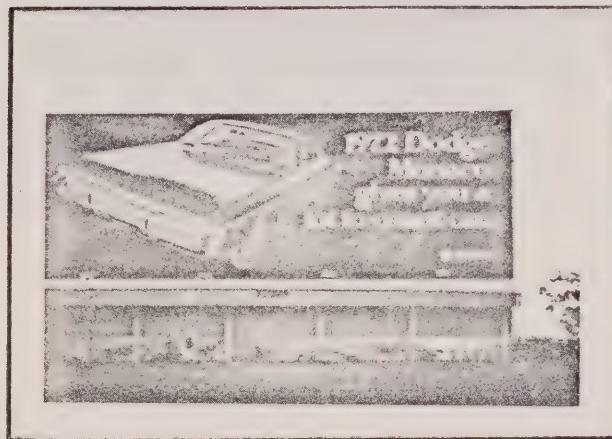
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TYPE III - TRIO or TRIVISION PANELS.

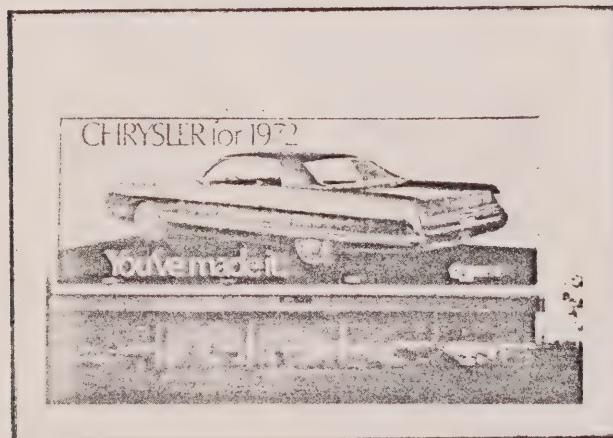
Section 9C Page B5



Side # 1



Side # 2



Side # 3

Revised Oct./73

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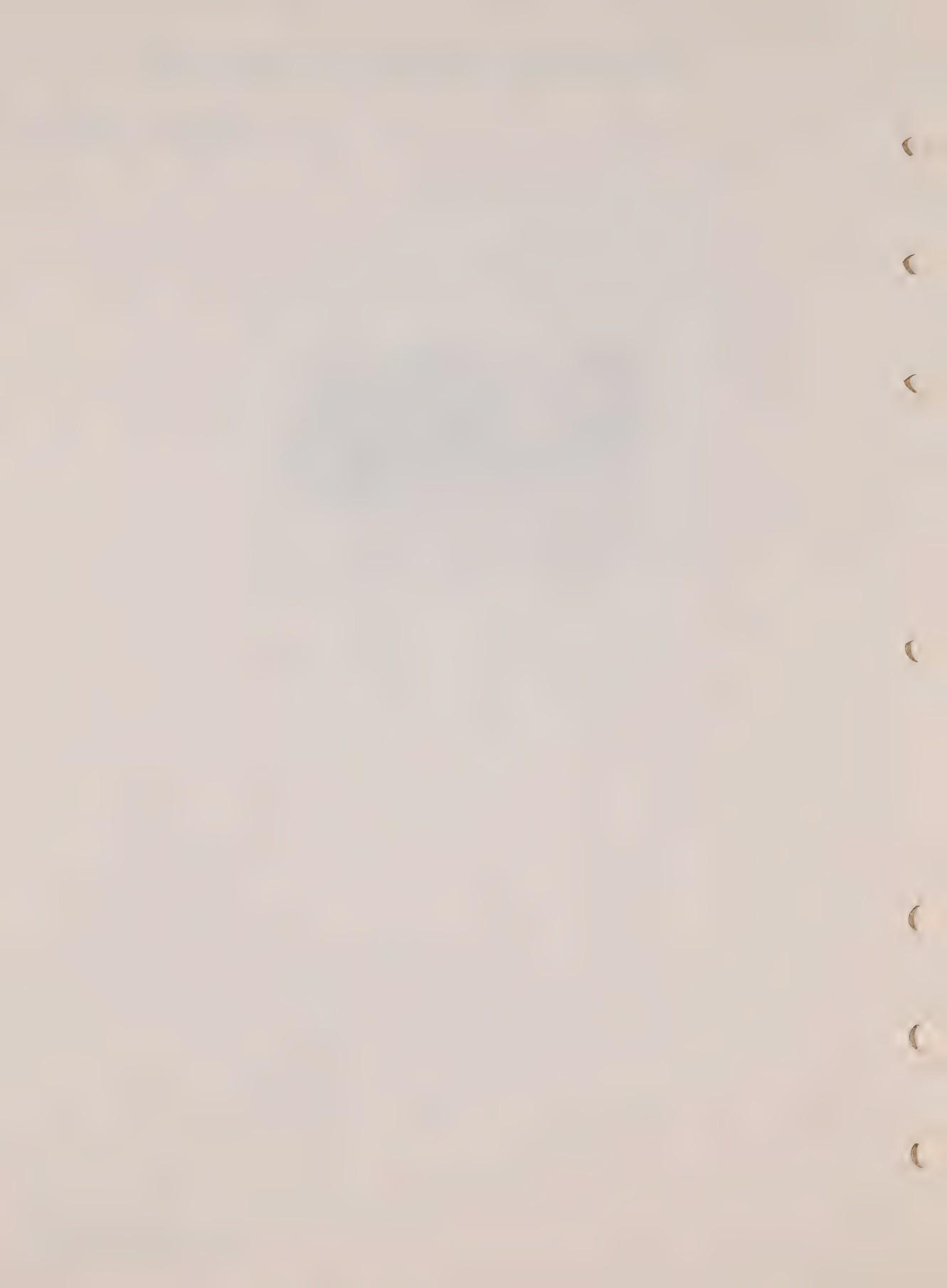
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TYPE IV - NEON or ELECTRIC SPECTACULAR PANEL.

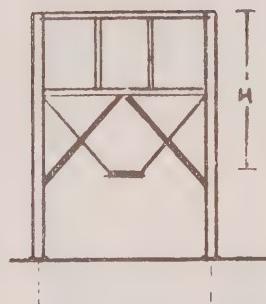
Section 9C Page B6





STEEL HOPPERS & BINS

Type "A": Open At Top



<u>CAPACITY</u>		<u>COST</u>
350	Cubic Feet	\$ 2500
500	" "	\$ 3000
650	" "	\$ 3300
800	" "	\$ 3800
900	" "	\$ 4300
1000	" "	\$ 4500
1200	" "	\$ 5000
1400	" "	\$ 5600
1600	" "	\$ 6400
1800	" "	\$ 7100
2000	" "	\$ 7800

Additive: Add \$4.50 per cubic foot for rubber lining.

- Note: 1. To compute capacity multiply top area of Hopper by height (top of bin to base of cone).
2. Interpolation not necessary, use the rate to nearest capacity.

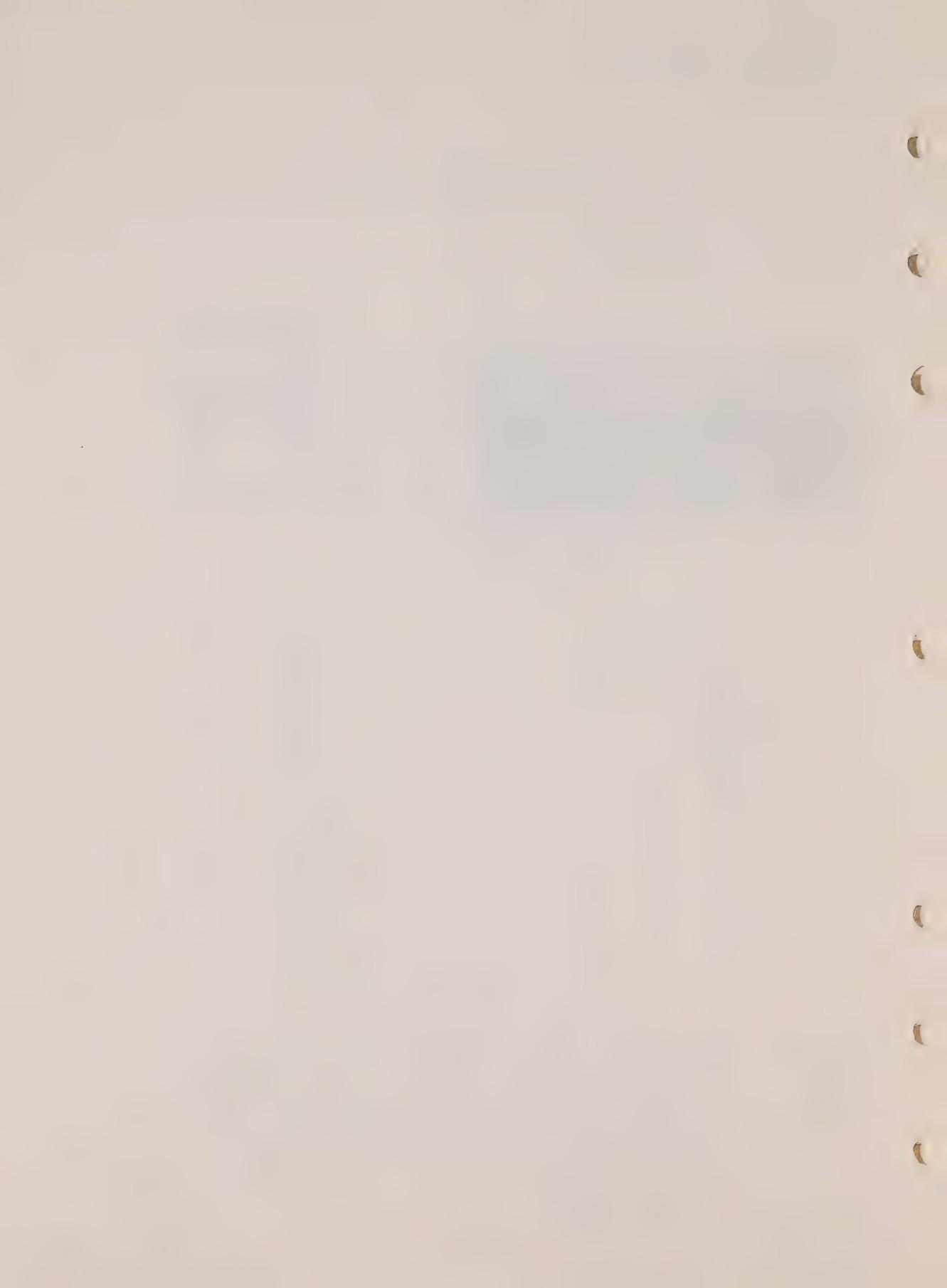
Developed By:

Vishnu Sittamchandar

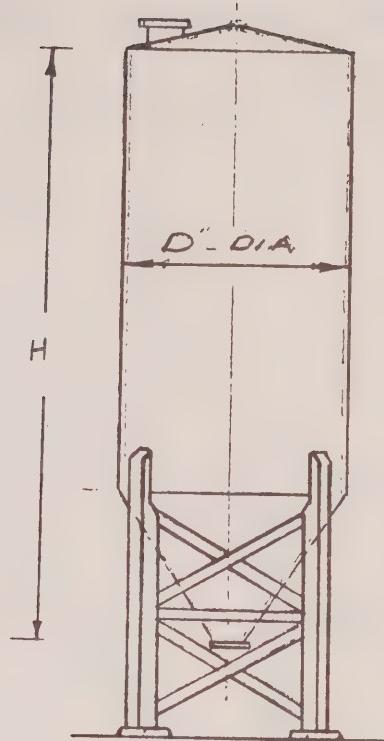
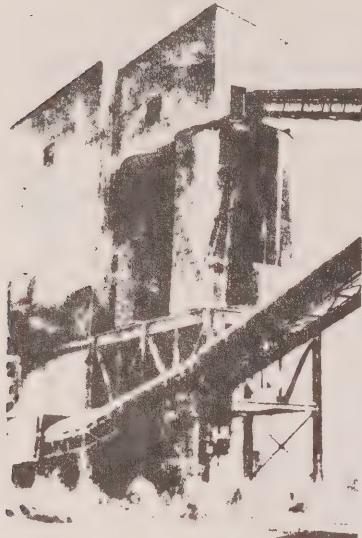
Approved By:

M. Ghosh

Issued Oct/1972



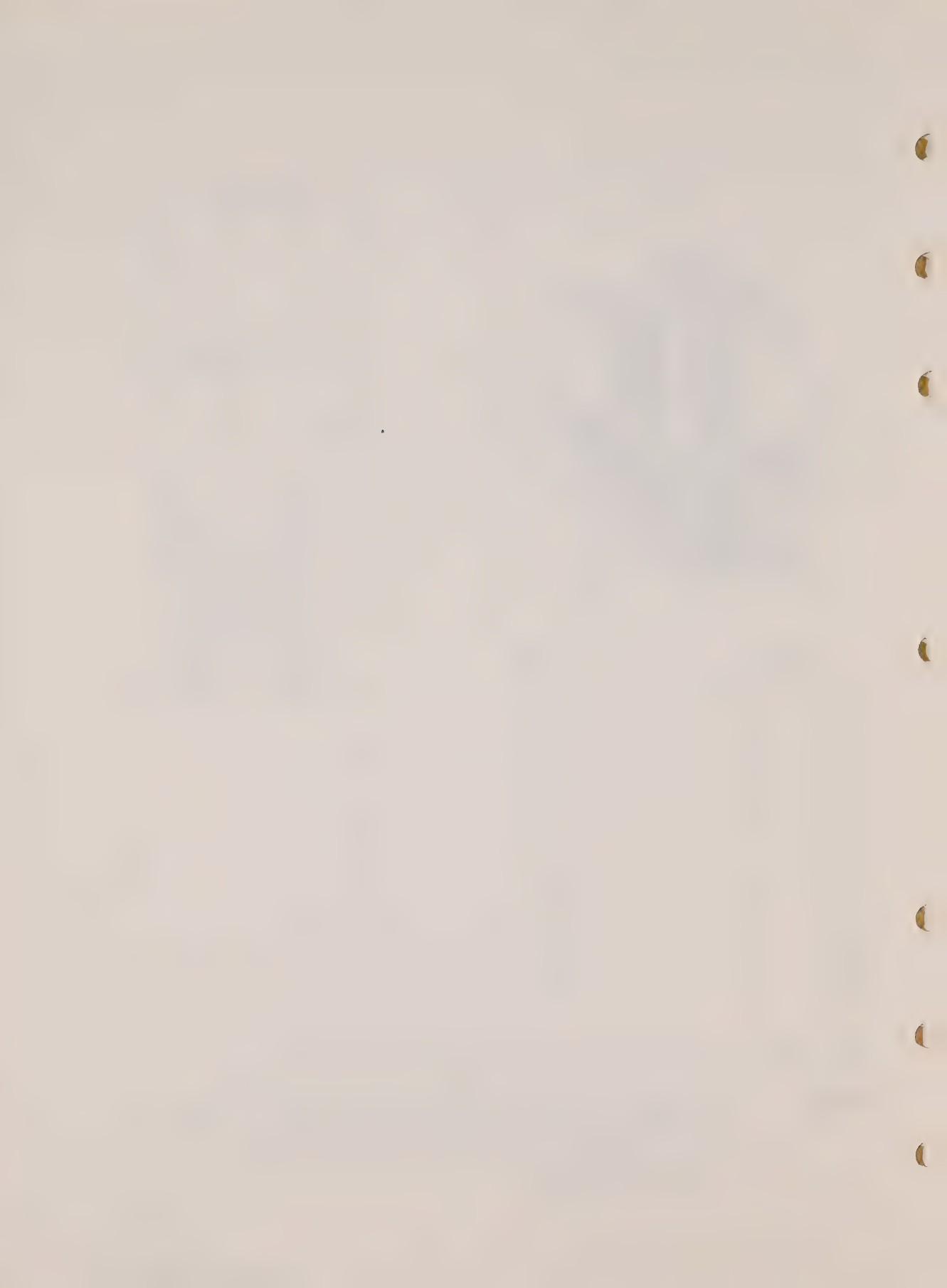
Type "B" Closed At Top



<u>CAPACITY</u>	<u>COST</u>
1000 Cubic Feet	\$ 2120
1250 "	\$ 2380
1500 "	\$ 2660
1750 "	\$ 2875
2000 "	\$ 3170
2500 "	\$ 3650
3000 "	\$ 4230
3500 "	\$ 5800
4000 "	\$ 6575
4500 "	\$ 6875
5000 "	\$ 7400

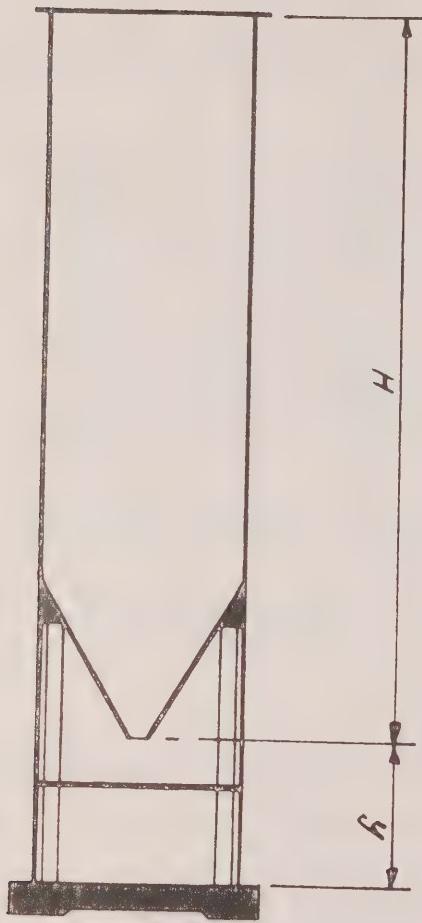
Additive: Add \$0.20 per cubic foot for air pressure.

- Note: 1. To compute capacity multiply top area of Hopper by height (top of bin to base of cone).
 2. Interpolation not necessary, use the rate to nearest capacity.

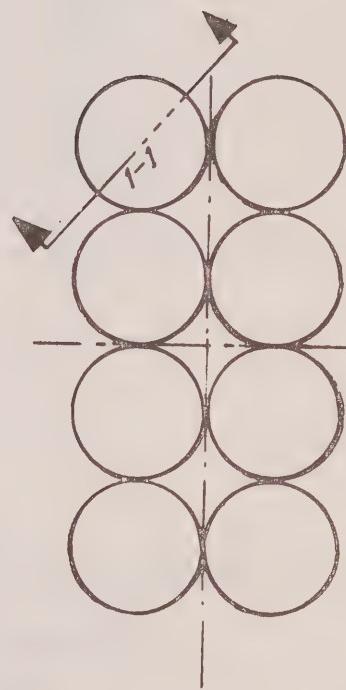


CONCRETE INDUSTRIAL SILOS

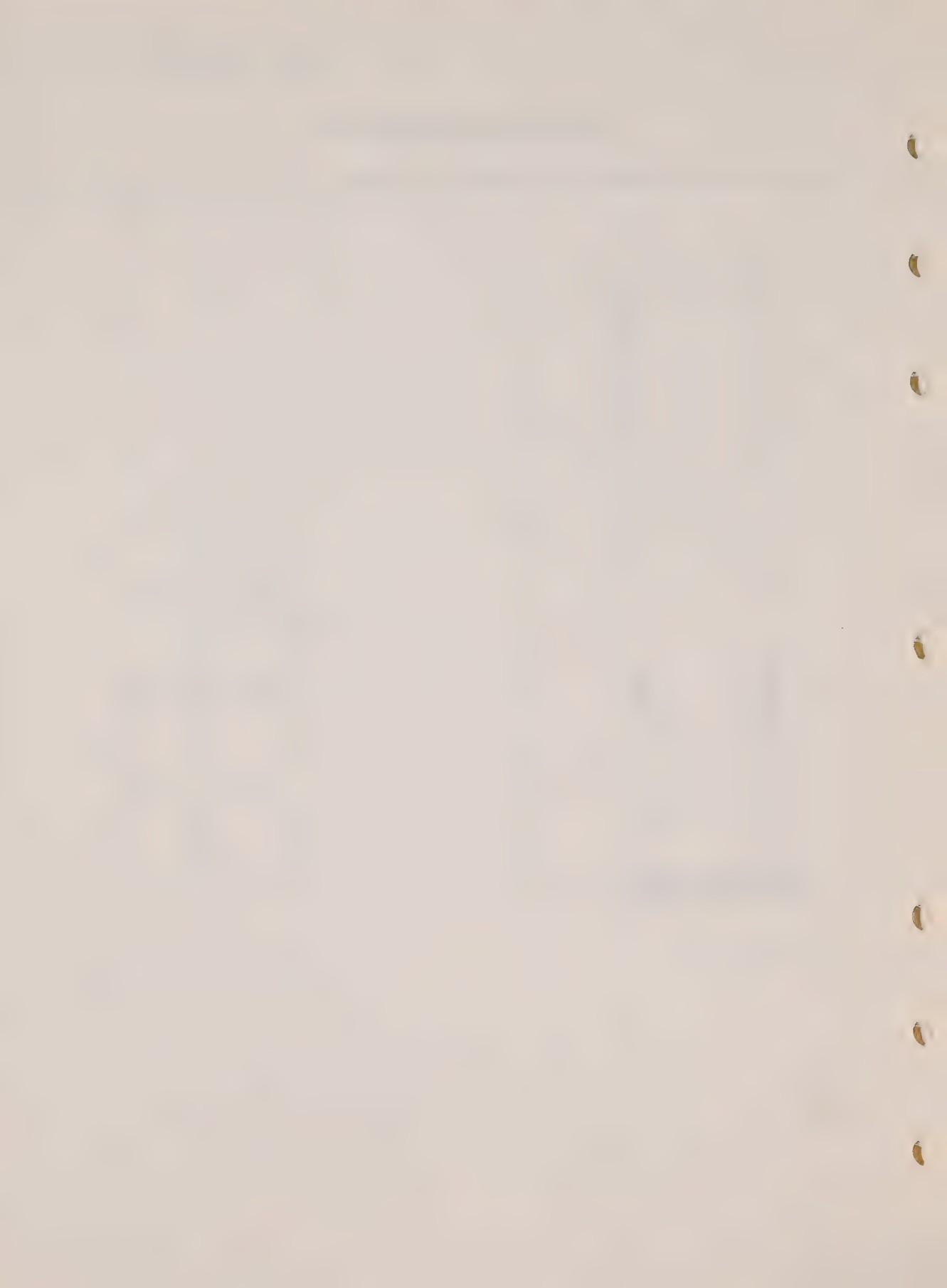
These silos are used for storage of cement, or for other similar uses.



Section 1-1



Typical 8-silo group



INDUSTRIAL SILOS COST FACTORS

A	B	C	D	E	F
Inside diameter ft.	Capacity per vert. ft. cu. ft.	Wall Cost per vert. ft. \$	Roof Cost per silo \$	Fdns & support structure Basic \$	Additional per vert. ft. \$
20	314	211	580	9,950	115
22	380	232	705	12,200	133
25	491	264	910	15,550	160
28	615	296	1140	19,600	190
30	706	317	1310	22,400	209
32	804	339	1498	25,100	231
35	962	461	1780	44,000	263
38	1134	584	2110	52,100	362
40	1256	603	2325	57,500	381

Replacement cost of one unit:

$$(C \times H) + D + E + (F \times h)$$

Example: Group of 8 silos 32' dia. each,

$$H = 100' \quad h = 20'$$

$$\text{One Unit: } (339 \times 100) + 1498 + 25,100 + (231 \times 20) = \$65,118$$

$$\text{Eight Units: } 8 \times 65,118 = \$520,928$$

Add for: Air pressure: \$0.20 per cu. ft. of capacity.
Additional installations and buildings.

For silos of diameter different from those listed in the table proper values can be interpolated.

Average Life: 60 years.

CAR WASH GENERAL COMMENTS

This section covers basically two types of car wash structures, the automatic type and the self service coin operated type. Specifications and rates are provided for both types, generally these rates include normal excavation and construction cost of the structures including all permanent partitions.

In the case of automatic car wash structures, the rates do not include heating or canopies. These items should be treated as additives UTILIZING the rates provided in Section 2C, pages 10 and 12.

Coin operated car wash rates are based on a three wall type structure, two end walls and side wall including overhead doors, while the remaining side is open. Any components over and above this basic structure should be treated as additives and reference should be made to In Place Cost "Section 11C".

S P E C I F I C A T I O N S F O R A U T O M A T I C

CLASS COMPONENTS	C - 4	C - 5
FOUNDATION	Conc. Blk. Wall and conc. footings below frost line.	Con. Blk. Wall and conc. footings below frost line.
FLOOR	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
EXTERIOR WALL	8" Conc. blk. No fenestrations	10" Conc. blk. with stucco, some face brk. with conc. blk. back-up. Up to 10% fenestrations
DOORS	Low quality wood, o/h doors and pedestrian doors.	Average quality wood-glass o/h doors and wood pedestrian doors.
ROOF	O.W.S.J. and metal deck. 1" Rigid insulation 4 Ply B.U.R.	O.W.S.J. and metal deck. 1" Rigid insulation 4 Ply B.U.R.
I N T E R I O R:		
WASH TUNNEL	Impervious paint on walls, floors and ceilings.	Impervious paint on walls, floors and ceilings.
OFFICES & WASH RMS.	Painted walls, floors and ceilings.	Painted walls, V.A.T. flooring and suspended low quality AC. ceilings.
ELECTRICAL	Min. number of incadescent fixtures and outlets.	Adequate no. of fluorescent fixtures and outlets.
PLUMBING	Min. number economy grade fixtures.	Standard fixtures.

CAR WASH STRUCTURES

CONST. CLASS 'C'

C - 6	C - 7	C - 8
Conc. Wall and re. conc. footings below frost line.	Re. conc. Wall and footings below frost line.	Re. conc. Wall and footings below frost line.
5" Re. conc. on compacted fill.	6" Re. conc. on compacted fill.	6" Re. conc. on compacted fill.
10" Good quality face brk. with conc. blk. back-up, some field stone. 10% fenestrations	10" Select quality and glazed face brk. with conc. blk. back-up 20% fenestrations	10" Glazed brk. with conc. blk. back-up, some field stone. 25% fenestrations
Good quality wood - glass o/h doors and pedestrian doors.	Good quality metal - glass o/h doors and pedestrian doors.	Good quality metal - glass o/h doors and pedestrian doors.
Precast cellular conc. slab. 1-1/2" Rigid insulation 4 Ply B.U.R.	Precast cellular or single tee conc. slab. 1-1/2" Rigid insulation 5 Ply B.U.R.	Precast cellular or double tee conc. slab. 2" Rigid insulation 5 Ply B.U.R.
Impervious paint on walls, floors and ceilings. Painted dwl. on walls with some ceramic tile, V.A.T. with some cer. tile flooring and suspended average quality AC. ceilings.	Impervious paint on floors and ceilings. Epoxy finish on walls. Painted plaster walls with cer. tile, terrazzo and cer. tile flooring and suspended good quality AC. ceilings.	Impervious paint on floors and ceilings. Epoxy finish on walls. Painted plaster walls with cer. tile, quarry tile flooring and suspended good quality AC. ceilings.
Standard number of fluorescent fixtures and outlets.	Standard number of fluorescent fixtures and outlets.	Standard number of fluorescent fixtures and outlets.
Standard fixtures.	Good quality fixtures.	Good quality fixtures.

COIN OPERATED

CLASS COMPONENTS	C - 4	C - 5
FOUNDATION	Conc. Blk. wall & conc. footings below frost line.	Conc. blk. wall & conc. footings below frost line.
FLOOR	4" Re. conc. slab on compacted fill.	5" Re. conc. slab on compacted fill.
WALLS	Conc. blk. - painted conc. blk. partitions.	Conc. blk. - painted some face brk. with conc. blk. back-up. conc. blk. partitions.
OVERHEAD DOORS	Low quality overhead doors.	Average quality wood-glass overhead doors.
ROOF	O.W.S.J. and metal deck or wood joists and wood T. & G. deck - $\frac{1}{2}$ " insulation. B.U.R.	O.W.S.J. and metal deck or wood joists and wood T. & G. deck. $\frac{1}{2}$ " insulation. B.U.R.
ELECTRICAL	Minimum number of incandescent fixtures and outlets.	Adequate number of fluorescent fixtures and outlets.

C A R W A S H

CONST. CLASS 'C'

C - 6	C - 7
Conc. wall & re. conc. footings below frost line.	Re. conc. wall & footings below frost line.
5" Re. conc. slab on compacted fill.	6" Re. conc. slab on compacted fill.
Good quality face brk. with conc. blk. back-up. conc. blk. partitions - painted.	Select quality and glazed face brk. with conc. blk. back-up - conc. blk. partitions - painted.
Good quality wood-glass overhead doors.	Good quality metal-glass overhead doors.
Precast conc. slab $\frac{1}{2}$ " insulation, B.U.R.	Precast conc. slab 1" insulation, B.U.R.
Standard number of fluorescent fixtures and outlets.	Standard number of fluorescent fixtures and outlets.

AUTOMATIC CAR WASH STRUCTURES

COST FACTORS

(BASE HEIGHT 12'0")

CLASS	4	5	6	7	8
COST PER SQ. FT.	8.85	9.90	13.55	15.20	16.20

HEIGHT ADJUSTMENT: 2½% for each foot of variation in height.

AREA ADJUSTMENT TABLE

(BASE 3,000 SQ. FT.)

2,000	2,500	3,000	3,500	4,000	4,500	5,000
1.07	1.03	1.00	0.98	0.96	0.94	0.93

NOTE: The above rates do not include heating or canopies. For additives refer to Section 2C.

COIN OPERATED CAR WASH

COST FACTORS

(BASE HEIGHT 12'0")

CLASS	4	5	6	7
COST PER SQ. FT.	6.50	7.15	9.00	9.70

HEIGHT ADJUSTMENT: 2% for each foot of variation in height.

AREA ADJUSTMENT TABLE

(BASE 3,000 SQ. FT.)

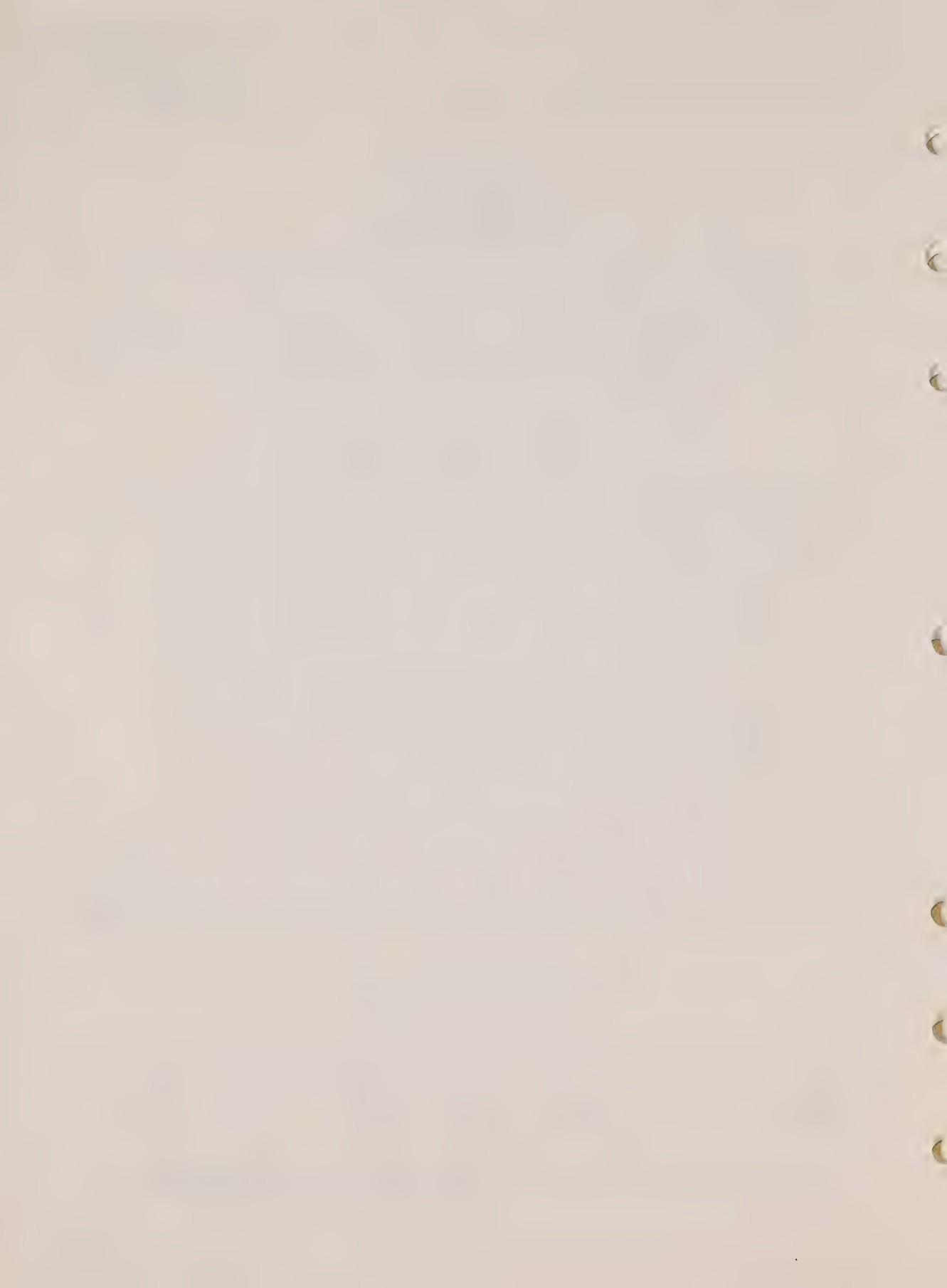
1,500	2,000	2,500	3,000	3,500	4,000	5,000
1.12	1.06	1.03	1.00	0.99	0.98	0.97

For coin operated car wash of steel framing and corrugated metal siding and roofing - use the rate \$ 5.40 per sq. ft.

AIR COMPRESSORS

<u>H.P.</u>		<u>R.C.N.</u>
2	-	\$ 600
3	-	\$ 700
5	-	\$ 900
7½	-	\$ 1,450
10	-	\$ 1,550
15	-	\$ 1,750
20	-	\$ 2,150

The above costs include compressor, air receiver tank, electric motor and installation, air lines and outlets have not been included.



GENERAL COMMENTS ON COMMUNICATION BUILDINGS

The following specifications and cost factors will cover most of the switching stations, central control offices, exchange buildings, Radio stations and Television installations, in three construction types, 'B' 'C' 'D' and in quality classes 5 to 8 inclusive.

It will be noted that the specifications are of a general and brief nature, with the classification being made by the exterior and structural make-up rather than the interior finish of the building, also a standard floor thickness of 4" - 6" Re. conc. is used throughout these specifications, and no allowance will be made for floor thicknesses over the 6" maximum, any thickness above 6" will be deemed as equipment bases or foundations and will not be charged to the building.

Provision has been made in the rates for the minimum amount of plumbing and electrical services, however, the assessor will be required to deduct from the rates if either or both of these items are lacking, as a general rule none of these buildings have a sprinkler system, fire protection being supplied by the use of CO₂ equipment.

Heating and air-conditioning etc. will be treated as an additive with rates taken from page 29 of this section. Basement will be an additive with rates from page 28 of this section.

Communication buildings are designed and engineered to keep maintenance at a minimum and with 40 to 50 year life expectancy depending on class.

The following cost factors are based on 1969 cost for Ontario and as such no modification should be made for location, if a base year other than 1969 is required the Valuation Section of the Assessment Standards Branch should be contacted.

PREPARED BY W.A.CARR *W.A.Carr*
APPROVED BY G.R.WEIR *G.R.Weir*
OCT 4th 1972

Issued Oct. 1972

Class Components	D5	D6
FOUNDATIONS/FOOTINGS	8"-10" Conc. Block Walls Below Frost Line. Adequate Conc. Footings. 1" Rigid Insulation.	10" Conc. Block Walls Below Frost Line. Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.
FLOORS	4" Re. Conc. on Compacted Fill and Vapour Barrier.	4" Re. Conc. on Compacted Sand and Gravel Fill and Vapour Barrier.
STRUCTURAL FRAMING	Insulated Stud Wall Framing 2" x 4" Studs at 16" Crs./3" Insulation Batts.	Insulated Stud Wall Frame of 2" x 4" Studs at 16" Crs./3" Insulation Batts.
EXTERIOR WALLS	Plywood or Asbestos Shingles used as Siding, on Building Board Sheathing.	Cedar T & G. Strips on Plywood Sheathing or Aluminum Board and Batten.
ROOF STRUCTURE	Prefabricated Wood Trusses $\frac{1}{2}$ " Plywood Sheathing 15" Tarred Felt, Asphalt Shingles 6" Batt Insulation.	Prefabricated Wood Trusses $\frac{1}{2}$ " Plywood Sheathing 15" Tarred Felt, Asphalt Shingles 6" Batt Insulation.
INTERIOR FINISH Floors Walls Ceiling Partitions	Painted Conc. Painted Drywall Painted Drywall Stud Walls Painted.	V.A.T. Painted Drywall
ELECTRICAL	Minimum	Minimum
PLUMBING	Minimum	Minimum
Issued Oct. 1972		

D7	D8
10" Conc. Block Walls Below Frost Line. Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.	10" Conc. Block Walls Below Frost Line. Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.
6" Re. Conc. on Compacted Sand and Gravel Fill and Vapour Barrier.	6" Re. Conc. on Compacted Sand and Gravel Fill and Vapour Barrier.
Insulated Stud Wall Frame of 2" x 4" Studs at 16" Crs/3" Insulation Batts.	Insulated Stud Wall Frame of 2" x 4" at 16" Crs/3" Insulation Batts.
P.V.C. Coated Redwood Siding on Plywood Sheathing or Flat Asbestos Cement Sheets.	Insulated Sandwich Panel or Brick Veneer over Plywood Sheathing.
Prefabricated Wood Trusses $\frac{1}{2}$ " Plywood Sheathing 15" Tarred Felt, Asphalt Shingles, 6" Batt Insulation.	Prefabricated Wood Trusses $\frac{1}{2}$ " Plywood Sheathing 15" Tarred Felt, Asphalt Shingles, 6" Batt Insulation.
V.A.T. Painted Drywall	V.A.T. Painted Drywall
Minimum	Minimum
Minimum	Minimum

Class Components	C5	C6
FOUNDATIONS/FOOTINGS	8-10" Masonry Walls Below Frost Line. Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.	8"-10" Masonry or Re. Conc. Walls Below Frost Line. Adequate Conc. Footings 1" Ridgid Insulation to Perimeter.
FLOORS	4" Re. Conc. on Compacted Fill and Vapour Barrier.	4" Re. Conc. on Compacted Gravel Fill and Vapour Barrier.
STRUCTURAL FRAMING	Load Bearing Masonry or Full Steel Frame Typical Bay 20' x 20'	Load Bearing Masonry or Full Steel Frame Typical Bay 20' x 20'
EXTERIOR WALL	Ave. Quality Face Brick with Conc. Block Back Up. 3 sides exposed concrete block. 4" Fibreglass Insulation.	Good Quality Face Brick with Block Back up. 4" Fibreglass Insulation.
ROOF STRUCTURE	4 Ply B.U.R. on 1½" Rigid Insulation with Vapour Barrier on Pre-Cast Conc. Deck.	5 Ply B.U.R. on 1½ " Rigid Insulation with Vapour Barrier on Pre-Cast Conc. Deck.
INTERIOR FINISH Floor Walls Ceiling Partitions	Painted Concrete " " Painted Concrete Painted Concrete Block	V.A.T. Painted Drywall Painted Concrete Painted Concrete Block
ELECTRICAL	Minimum	Minimum
PLUMBING	Minimum	Minimum
Issued Oct. 1972		

C7	C8
10" - 12" Re. Conc. Walls Below Frost Line. Adequate Conc. Footings 1" Rigid Insulation to Perimeter.	10" - 12" Re. Conc. Walls Below Frost Line. Adequate Conc. Footings 1" Rigid Insulation to Perimeter.
6" Re. Conc. On Compacted Sand and Gravel Fill with Vapour Barrier.	6" Re. Conc. on Compacted Sand and Gravel Fill with Vapour Barrier.
Load Bearing Masonry or Full Steel Frame Typical Bay 20' x 20'	Load Bearing Masonry or Full Steel Frame Typical Bay 20' x 20'
Select Face Brick with some Pre-Cast Conc. Panels on Conc. Block Back-Up. 4" Fibreglass Insulation.	Pre-Cast Conc. Panels with some Field Stone or other natural stone on Conc. Block Back-Up. 4" Fibreglass Insulation.
5 Ply B.U.R. on 2" Rigid Insulation with Vapour Barier on Pre-Cast Conc. Deck.	5 Ply B.U.R. on 2" Rigid Insulation with Vapour Barrier on Pre-Cast Conc. Deck.
V.A.T. Painted Dry Wall on Metal Studs. Painted Concrete. Painted Conc. Block.	V.A.T. Painted Dry Wall on Metal Studs. Painted Concrete. Painted Conc. Block.
Minimum	Minimum
Minimum	Minimum

SECTION 9C PAGE C26

BASE YEAR 1969

Class Components	B6	B7	B8
FOUNDATIONS/ FOOTINGS	10"-12" Re. Conc. Walls Below Frost Line. Adequate Conc. Footings 1" Rigid Insulation to Perimeter.	10"-12" Re. Conc. Walls Bel Frost Line Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.	10"-12" Re. Conc. Walls Below Frost Line Adequate Conc. Footings. 1" Rigid Insulation to Perimeter.
FLOORS	4"-6" Re. Conc. on Compacted Gravel Fill and Vapour Barrier.	6" Re. Conc. on Compacted Gravel Fill and Vapour Barrier.	6" Re. Conc. on Compacted Gravel Fill and Vapour Barrier.
STRUCTURAL FRAMING	Re. Conc. Frame Typical Bay 20' x 20'	Re. Conc. Frame Typical Bay 20' x 20'	Re. Conc. Frame Typical Bay 20' x 20'
EXTERIOR WALLS	Good Quality Face Brick With Conc. Block Back-Up.	Select Face Brick with Some Pre-Cast Conc. Panels Conc. Block Back-Up.	Pre-Cast Conc. Panels with some Field Stone or other Natural Stone on Conc. Block Back-Up.
ROOF STRUCTURE	5 Ply B.U.R. on 1½" Rigid Insulation with Vapour Barrier on Conc. Deck.	5 Ply B.U.R. on 1½" Rigid Insulation with Vapour Barrier on Conc. Deck.	5 Ply B.U.R. on 1½" Rigid Insulation with Vapour Barrier on Conc. Deck.
INTERIOR FINISH			
Floors	V.A.T.	V.A.T.	V.A.T.
Walls	Painted Concrete Blk	Painted Drywall on Metal Studs.	Painted Drywall on Metal Studs.
Ceiling			
Partitions	Painted Concrete Painted Concrete Block	Painted Concrete. Painted Concrete Block	Painted Concrete. Painted Concrete Block
ELECTRICAL	Minimum	Minimum	Minimum
PLUMBING	Minimum	Minimum	Minimum
Issued Oct. 1972			

COMMUNICATION BUILDINGS

Base Height 15'-0"

Shape \ Class	B6	B7	B8
A	15.60	16.40	18.25
B	16.30	17.05	19.00
C	16.95	17.70	19.70

Shape \ Class	C5	C6	C7	C8
A	11.90	13.65	14.90	16.90
B	12.40	14.20	15.55	17.55
C	12.85	14.75	16.10	18.25

Shape \ Class	D5	D6	D7	D8
A	7.80	9.30	10.40	12.20
B	8.10	9.65	10.80	12.70
C	8.40	10.05	11.25	13.20

AREA ADJUSTMENT
(Base 3600 S.F.)

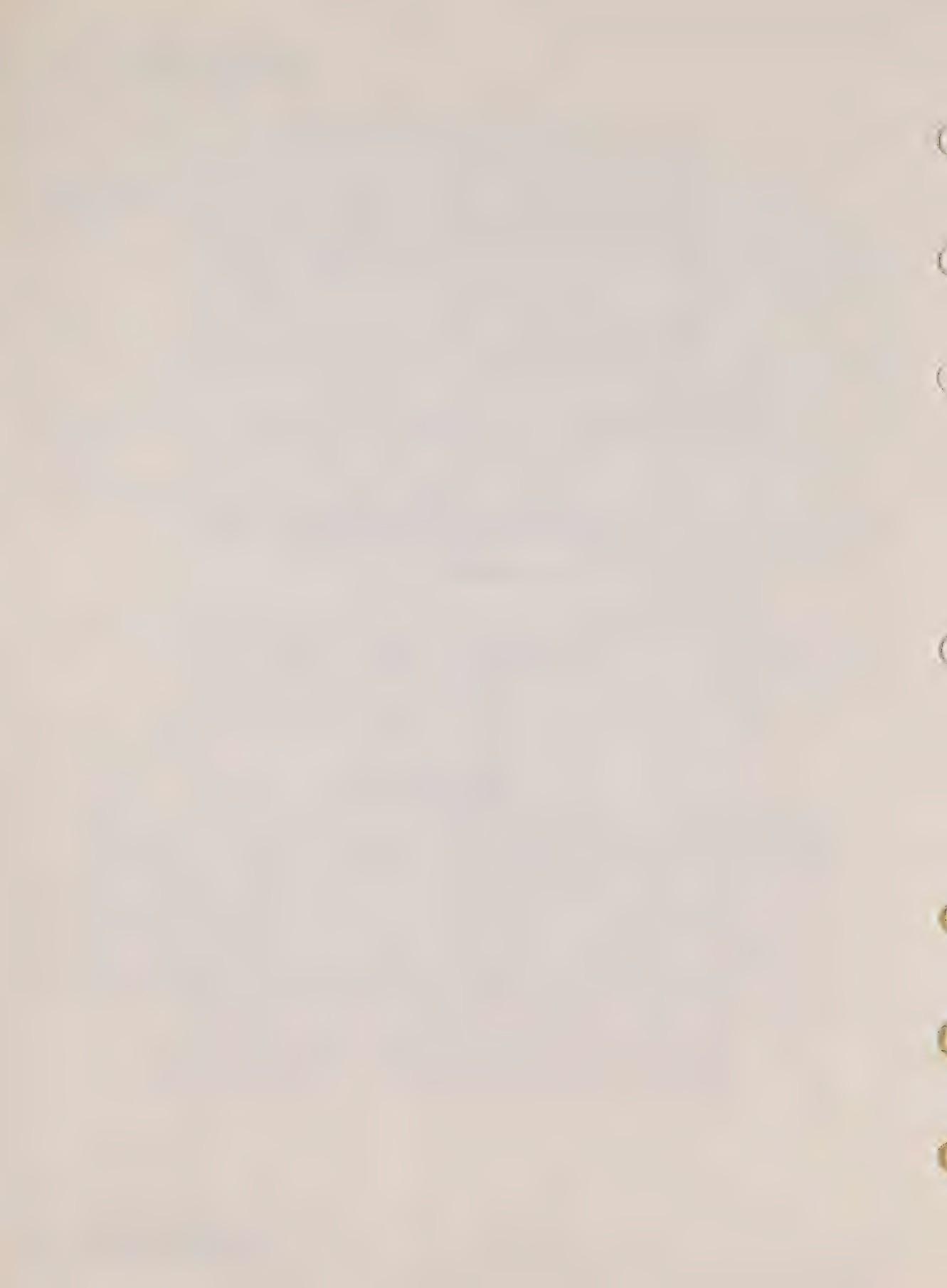
400	600	1,200	1,600	2,400	3,200
2.18	2.10	1.53	1.20	1.15	1.05
3,600	4,800	6,400	8,000	9,600	14,400
1.00	.95	.88	.85	.82	.75

Height Adjustment. 2% per foot of wall height variation.

NOTES: For second floor use 80% of the first floor rate. For

third floor and up use 80% plus 2% per floor.

Basements: Use rates from P28. Heating, etc. use rates from P29.



COMMUNICATION BUILDINGS

ADDITIVES CONT'D

HEATING, AIR CONDITIONING AND VENTILATION
BASE HEIGHT 15'

SYSTEM	DESCRIPTION	COST PER SQ. FOOT			
		LOW COST	AVERAGE	HIGH COST	EXCELLENT
HEATING	Automatic Suspended Units (Gas or Hot Water)	\$0.40	\$0.55	\$0.70	\$0.90
	Forced Air (with ducts)	0.50	0.65	0.85	1.00
	Hot Water (Baseboard or Radiators)	0.60	0.85	1.15	1.50
COOLING SYS	Refrigerated Air Conditioning	0.80	1.10	1.50	2.00
	Evaporative Cooler	0.45	.55	0.70	.90
COMBINED	Hot and Chilled Water (Zoned)	1.55	2.25	3.00	3.80
	Warm and Cooled Air (Zoned)	1.10	1.45	1.90	2.45
VENT.	Ventilation	0.20	0.30	0.35	0.40

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE: Above square foot cost factors to be applied against the total heated floor area (exterior measurements).

BASE YEAR 1969



CLASS "B" CONSTRUCTION

B7



CLASS "C" CONSTRUCTION

C6



CLASS "C" CONSTRUCTION

Issued Oct. 1972



CLASS "D" CONSTRUCTION

D6



CLASS "D" CONSTRUCTION

D8



CLASS "D" CONSTRUCTION

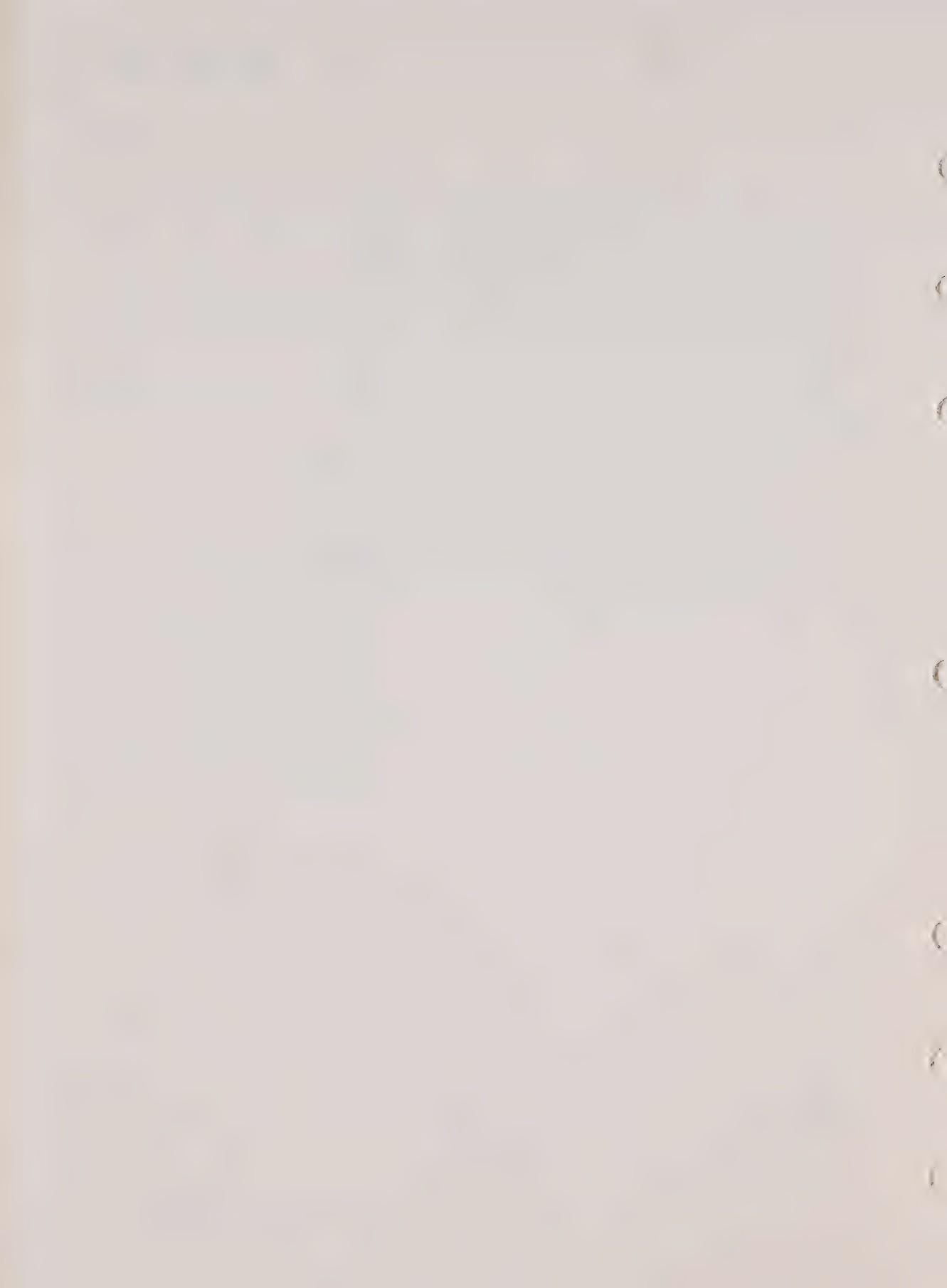
D5

Issued Oct. 1972

COMMUNICATION BUILDINGS
DEPRECIATION TABLES
(BUILDINGS)

NOTE:

Communication buildings Depreciation Tables.
Use O.R. Tables, Sect. 10C Pages 4 & 5, with
office type Average Life Tables as suggested
in Section 10C page 2.



T.V. and RADIO TRANSMITTERS & TOWERS

GENERAL COMMENTS

The following cost factors have been developed on a base year of 1969 and will cover most radio and television installations found within the Province of Ontario.

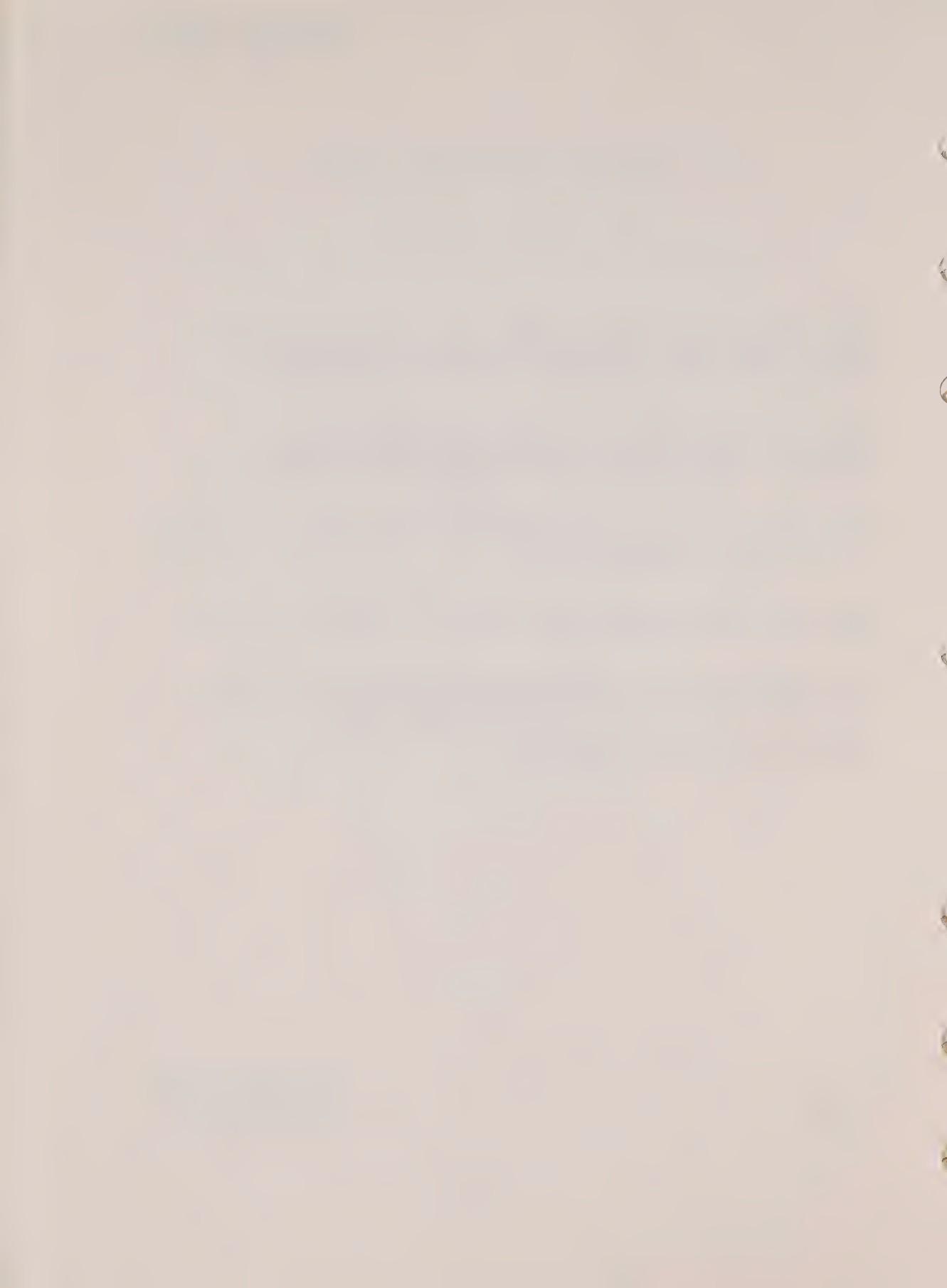
The buildings should be valued using communication building rates (Section 9C, Pages C27-C29) wherever possible. This however will not apply to the studio type.

The transmitting-receiving towers should be valued according to the rates on pages C33-C34.

The transmitters within these structures should be valued using the rates on page C35.

The depreciation for this subsection shall be a flat 50%.
(For depreciation of structure see page C32)

Antennas shall not be assessed.

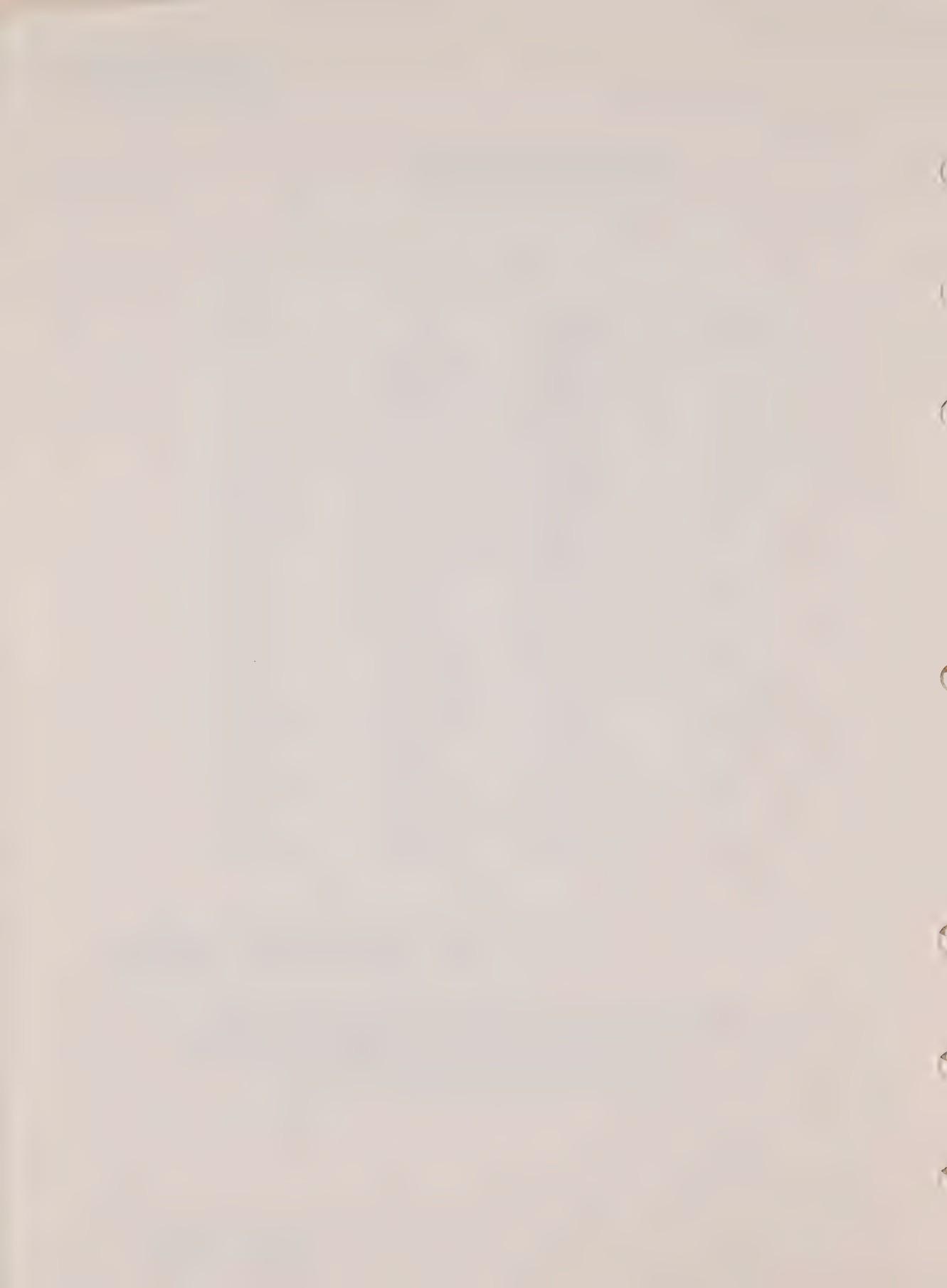


SELF SUPPORTING TOWERS

HEIGHT FT.	TYPE		
	'A'	'B'	'C'
	COST \$	COST \$	COST \$
50	7,500	14,000	
75	8,250	18,500	
100	9,000	24,000	29,500
125	13,500	30,000	36,000
150	19,000	36,000	44,000
175	25,500	43,000	52,000
200	33,000	51,000	62,000
225	41,500	60,000	73,500
250	51,000	70,000	85,000
275	63,500	83,000	100,000
300	77,000	96,000	113,500
325	93,000	112,000	139,000
350	112,000	139,000	164,500

TOWER TYPES 'A' Tower Without Platforms
 'B' Tower With One Platform
 'C' Tower with Multi-Platforms

NOTE: The above cost include all concrete pads and foundations, painting, ladder and erection. The costs do not include aircraft lighting, antenna or cable support bridge.



TRIANGULAR GUYED TOWERS

SIZE	COST \$/L.F.
10"	17.00
20"	25.00
24"	33.00
40"	66.00
48"	83.00
54"	95.00
72"	133.00
84"	201.00

NOTE:

NORMAL APPLICATION

Radio transmission for police, taxi and public service use; U.H.F., V.H.F., Radio, micro-wave transmission systems and master T.V. systems

Size -- pertains to one side of the base of the tower.

The above costs include all concrete pads and foundations, guy wires, painting, aircraft lighting, integral ladder for maintenance work and all erection costs.

The above costs do not include antennas, coaxial cable, etc., or the erection of any of these items.

Revised #2 4/76
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TRANSMITTERS

RADIO - AM & FM MODES

OPERATING POWER kW	AVERAGE COST \$
0.1	2,200
0.5	10,000
1.0	13,000
3.0	15,500
5.0	18,800
6.0	36,600
10.0	37,800
20.0	42,400
40.0	64,800
50.0	110,000
100.0	164,500
200.0	290,200

NOTE:

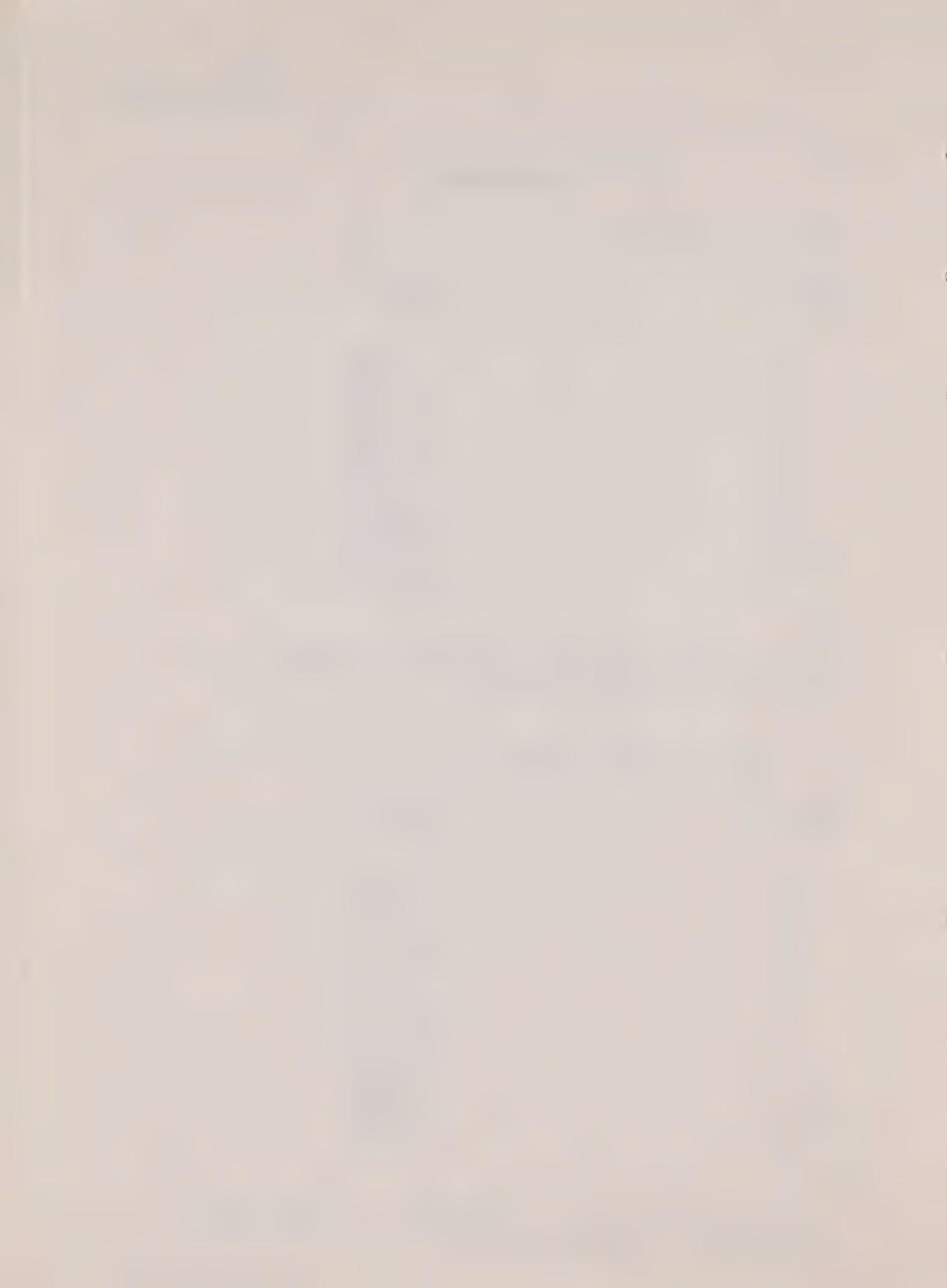
The above costs include all accessories necessary for the transmitter to function properly.

T.V. - V.H.F. & U.H.F. MODES

OPERATING POWER kW	AVERAGE COST \$
0.5	60,000
1.0	90,000
4.0	110,000
5.0	120,000
10.0	150,000
15.0	155,000
17.5	175,000
25.0	180,000
30.0	200,000
35.0	224,000
50.0	250,000
55.0	260,000
60.0	300,000
110.0	383,000

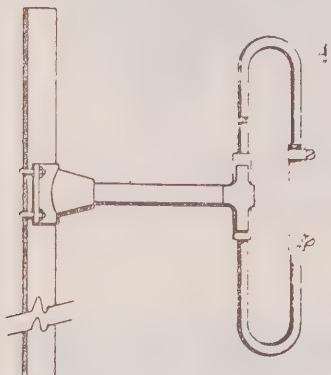
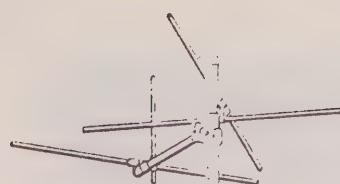
NOTE:

The above costs include all accessories necessary for the transmitter to function properly.



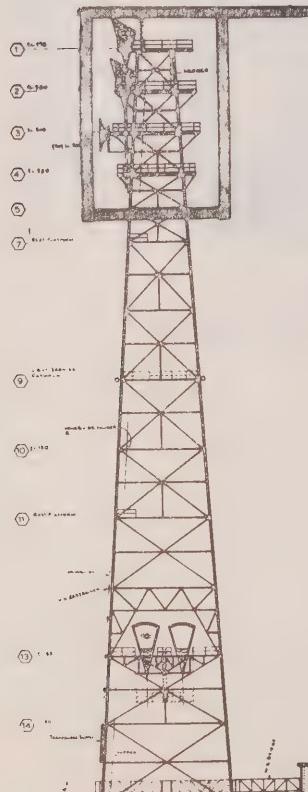


CORNER REFLECTOR
ANTENNA

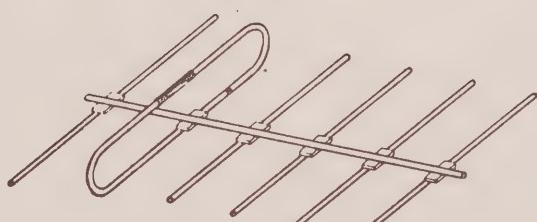
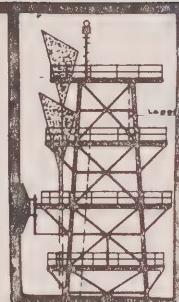


STANDARD DIPOLE
ANTENNA

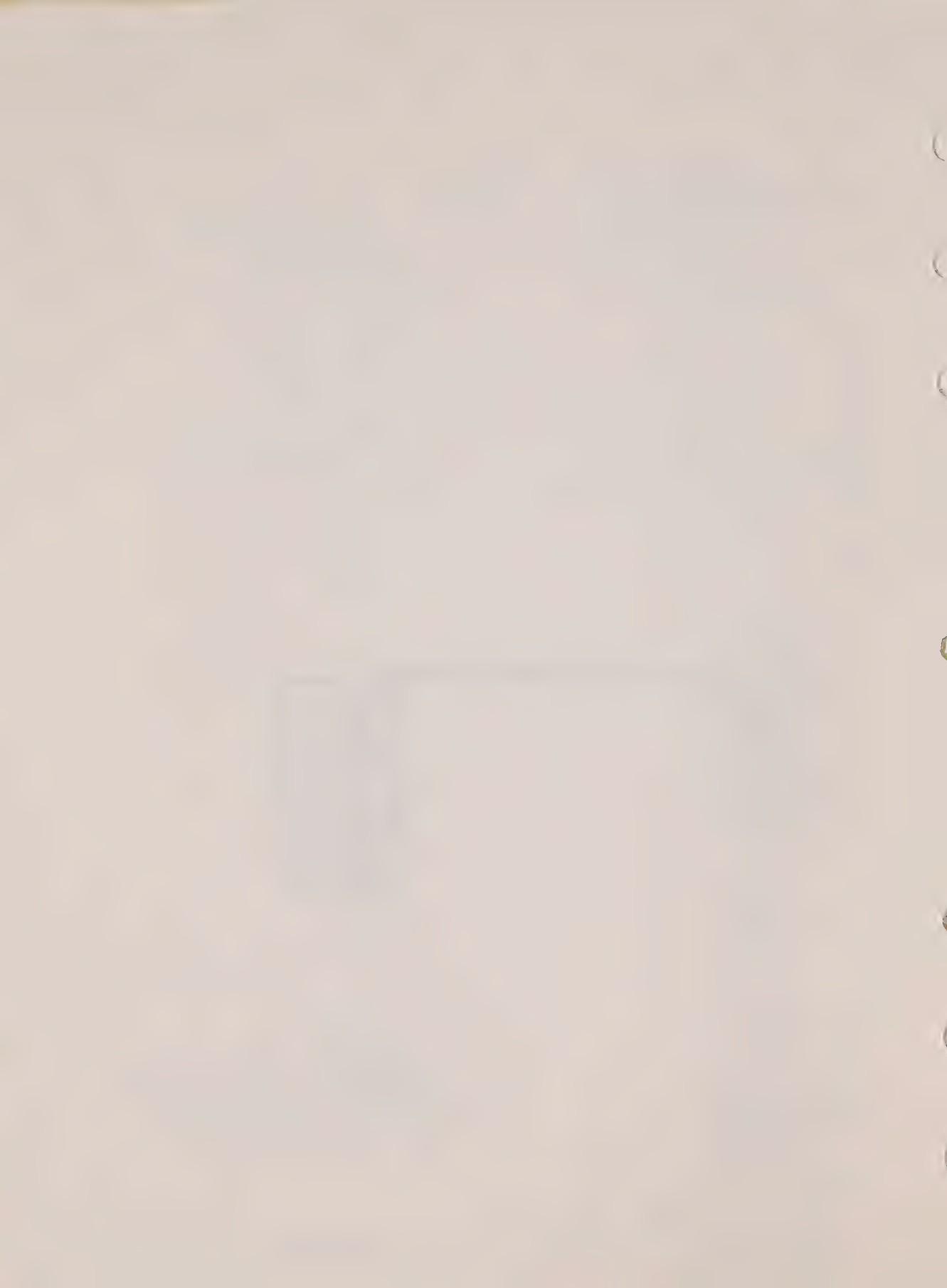
UNIDIRECTIONAL CARDIOD
ANTENNA



TYPICAL TOWER
SELF SUPPORTING



YAGI ANTENNA





TYPICAL HIGH PERFORMANCE
PARABOLIC ANTENNA



STANDARD MICRO-WAVE
AND
COMMON CARRIER



TYPICAL VAGI ANTENNA
APPLICATION



OVERHEAD CRANES AND CRANEWAYS

Overhead cranes come in three design categories as follows:

1. Single Girder Underrunning Crane
2. Single Girder Top Running Crane
3. Double Girder Top Running Cranes

To arrive at total crane cost the cost factors have to be summarized as follows:

$$\begin{array}{cccc} \text{Total Crane} & = & \text{Crane Bridge} & + \text{Hoist} & + \text{Craneway} \\ & & \text{Cost} & \text{Cost} & \text{Cost} \end{array}$$

Specification The cost tables are based on single speed motor driven bridges and hoists and include girders, endtrucks, trolleys, push button bridge and hoist controls, stop/start switches, disconnect switches and installation cost.

For handchain driven bridges and hoists see percent adjustment factors below the cost tables.

Craneways include structural steel beams, steel rails installation cost and paint finish.

For depreciation see section 10C page 6

OVERHEAD CRANES AND CRANEWAYS

COST OF SINGLE GIRDER UNDERRUNNING CRANE BRIDGES

Capacity in Tons	SPAN IN FEET			
	20'	30'	40'	50'
2	\$ 4000	\$ 5300	\$ 6700	\$ 8600
3	4200	5400	7300	9300
4	4400	5900	7600	9800
5	4500	6000	8100	10400
6	5700	6500	8600	11000
7½	6700	8200	10300	12400
10	6900	8400	10500	13300

Deduct 25% if handchain driven bridge

COST OF SINGLE GIRDER TOP RUNNING CRANE BRIDGES

Capacity in Tons	SPAN IN FEET			
	30'	40'	50'	60'
2	\$ 5200	\$ 6700	\$ 8500	\$ 9900
3	5300	7200	9200	10900
4	5800	7400	9700	11500
5	5900	8000	10300	12100
6	6500	8600	10700	12500
7½	7700	9700	11900	13700
10	7900	10000	12700	14800

Deduct 25% if handchain driven bridge

OVERHEAD CRANES AND CRANEWAYS

COST OF DOUBLE GIRDER TOP RUNNING CRANE BRIDGE

Capacity in Tons	SPAN IN FEET						
	30'	40'	50'	60'	65'	70'	75'
5	\$9000	\$11200	\$15100	\$17500	\$27800	\$28100	\$30000
6	9100	11300	15200	17600	27900	28200	30200
7½	9500	12200	15800	20700	29700	30500	33000
10	10000	13300	16400	23600	31300	31400	33700
15	12100	15700	20100	25400	---	---	---
20	12800	18000	21600	26100	---	---	---
25	14200	19000	25200	30000	---	---	---

Deduct 25% if hand chain driven crane bridge

ADDITIVES TO CRANE BRIDGE COST FACTORS

Add \$550 for 2 speed travel to all single girder cranes

Add \$700 for 2 speed travel to all double girder cranes

Add \$100 + \$10.00/LF of span for walkway on crane bridge

Add \$1600 for cab controls including seat and console

Plus \$750 for open cab

Or \$1900 for enclosed cab

Or \$2300 for enclosed and heated cab

Or \$2650 for enclosed cab with armor glass and including heating

OVERHEAD CRANES AND CRANEWAYS

COST TABLES FOR HOISTS

SINGLE GIRDER CRANE HOISTS

Capacity in Tons	Handchain Driven Hoist	Motor Driven Hoist
2	\$ 1900	\$ 2500
3	2700	3400
4	3200	3800
5	3300	3800
6	3600	3800
$7\frac{1}{2}$	3700	4300
10	4700	5000

DOUBLE GIRDER CRANE HOISTS

Capacity in Tons	Handchain Driven Hoist	Motor Driven Hoist
5	\$ 3800	\$ 4200
6	3900	4300
$7\frac{1}{2}$	4200	4700
10	4900	5400
15	8000	8600
20	8600	9300
25	10000	10800

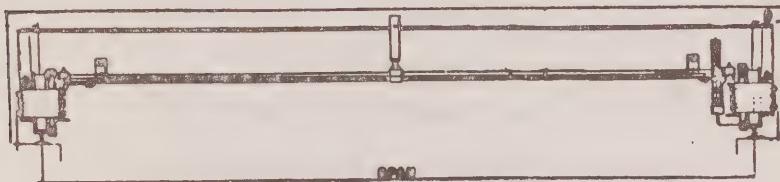
Add \$300 for 2 speed travel

Add \$500 to 1200 for creep speed including controls

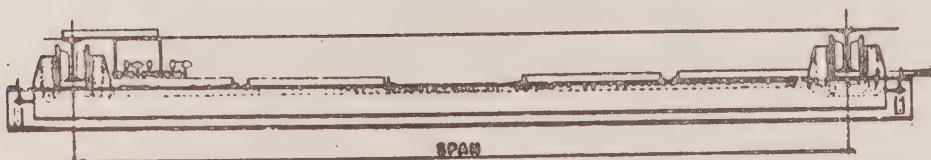
Base Year 1969

OVERHEAD CRANES AND CRANEWAYS
COST FOR CRANEWAYS

<u>SINGLE GIRDER CRANEWAY</u>		<u>DOUBLE GIRDER CRANEWAY</u>	
<u>Capacity in Tons</u>	<u>Cost Per LF Runway</u>	<u>Capacity in Tons</u>	<u>Cost Per LF Runway</u>
2	\$20.00	5 to 10	\$35.00
3 to 5	25.00	15	50.00
6 to 10	35.00	20	60.00
		25	75.00



TOP RUNNING CRANE BRIDGE



UNDERRUNNING CRANE BRIDGE

CONVEYORS

GENERAL COMMENTS

Conveyors come in two design categories:

- 1) Gravity Conveyors
- 2) Power Driven Conveyors

The above two conveyor designs are further subdivided into

GRAVITY CONVEYORS

- a) Gravity Wheel Conveyor
- b) Gravity Roller Conveyor

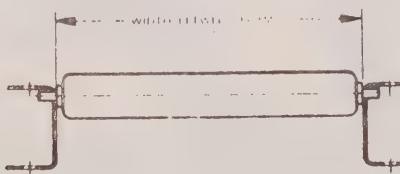
These conveyors are assembled in 10' and 5' Standard Sections

POWER DRIVEN CONVEYORS

- c) Slider Bed Belt Conveyor
- d) Belt on Roller Conveyor
- e) Live Roller Conveyor
- f) Accumulation Wheel Conveyor
- g) Accumulation Live Roller Conveyor

$$\boxed{\text{Total Conveyor Cost}} = \boxed{\text{Cost of Total LF of Conveyor Bed Section}} + \boxed{\text{Cost of Drive, Motor, End Roller}} + \boxed{\text{Cost of General Additives}}$$

ILLUSTRATION TO CLASSIFY CONVEYOR WIDTH



All the foregoing conveyors are most commonly used in shipping and storage operations in warehousing and distribution, etc.

CONVEYORS

GENERAL COMMENTS

POWER DRIVEN CONVEYORS

- h) Steel Channel Framed Trough Conveyor
- j) Steel Truss Framed Trough Conveyor

To classify conveyor measure belt width.

These two types of conveyors are used for conveying bulk material such as stone, gravel, etc. in mines, quarries, etc.

- k) Model 228, 348, 458, 678 Overhead Trolley Conveyor
- l) Enclosed Chain Track Overhead Conveyor
- m) Enclosed Hand Pushed Trolley Conveyor

These conveyors are used in distribution and warehousing, etc.

$$\boxed{\text{Total Conveyor Cost}} = \boxed{\text{Cost of Total LF of Conveyor Track, Chain and Trolleys}} + \boxed{\begin{aligned} &\text{Cost of Drive Roller or Wheel Turns Roller or Wheel Take-Ups} \\ &\text{Horizontal Turns and Vertical Curves} \end{aligned}} + \boxed{\text{General Additives}}$$

No local adjustments are to be made to the following rates.

CONVEYORS

GRAVITY WHEEL CONVEYOR IN STEEL

The following cost table includes side channels, steel wheels on ball bearings and axles, hook connectors and installation cost.

Conveyor Width	# of Wheels per LF of Length	Cost per LF	Cost of 90° Curve	Cost of 45° Curve
12"	8	\$ 5.50	\$ 65.	\$ 40.
15"	10	6.00	70.	45.
18"	14	7.50	85.	50.
24"	16	8.00	95.	60.

Additives

Add \$ 0.50/LF of straight section or curve for every additional 2 wheels/LF of length.

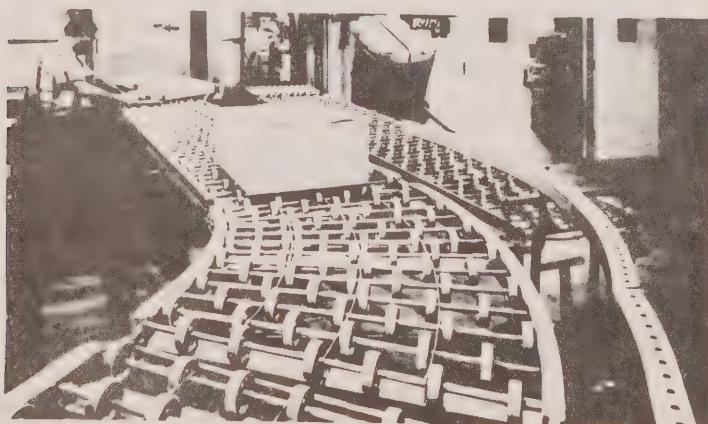


Figure 1-1. Typical Wheel Conveyor

CONVEYORS

GRAVITY ROLLER CONVEYOR IN STEEL

The following cost tables include side channels, steel rollers on ball bearings and axles, hook connectors and installation cost.

Roller Conveyor with $1\frac{1}{2}$ " dia. Rollers

Conveyor Width	Cost per LF				
	Roller Centres				
	3"	$4\frac{1}{2}$ "	6"	9"	12"
12"	\$ 6.70	\$ 5.60	\$ 4.80	\$ 4.10	\$ 3.50
Add for each 3" width increase	0.50	0.30	0.25	0.25	0.30

Roller Conveyor with 2" dia. Rollers

Conveyor Width	Cost per LF				
	Roller Centres				
	3"	$4\frac{1}{2}$ "	6"	9"	12"
12"	\$ 9.80	\$ 7.80	\$ 6.80	\$ 5.90	\$ 5.30
Add for each 3" width increase	0.80	0.55	0.45	0.30	0.25

Roller Conveyor with $2\frac{1}{2}$ " dia. Rollers

Conveyor Width	Cost per LF				
	Roller Centres				
	3"	$4\frac{1}{2}$ "	6"	9"	12"
12"	\$ 18.00	\$ 13.50	\$ 11.00	\$ 8.70	\$ 7.30
36"	33.00	24.00	19.00	14.80	12.00
Add for each 3" width increase	1.50	1.00	0.80	0.60	0.45

CONVEYORS

GRAVITY ROLLER CONVEYORS

Additives

Cost Table for Roller Curves

Conveyor Width	Single Lane 90°	Single Lane 45°	Double Lane 90°	Double Lane 45°
12"	\$98.00	\$60.00	\$137.00	\$82.00
Add for each 3" width increase	7.00	4.00	7.00	4.00

Cost Table for Hand Operated Wheel and Roller Switches

Type of Switch	Width of Switch		
	12"	18"	24"
45° spur curve	\$ 65.00	\$ 85.00	\$ 95.00
spur curve switch	230.00	250.00	400.00
Y curve junction	105.00	120.00	125.00
Y curve switch	200.00	310.00	350.00
spur and Y curve switch	540.00	660.00	-
2 or 3 way roller switch table	570.00	630.00	850.00

General Additives for Wheel and Roller Conveyors

Add \$14.00 per conveyor support

Add \$4.00 per support for each support bracing

Add \$500.00 for manual operated wheel or roller turntable

Add \$2.00/ball transfer in ball transfer table.

CONVEYORS

GRAVITY CONVEYORS

General Additives for Wheel and Roller Conveyors

Add \$7.00 for cutting and welding of any 5' or 10' standard section.

Add \$15.00 for each gate hinge not counterbalanced.

Add \$45.00 for each gate hinge counterbalanced.

Add \$1.25/LF for straight section guard rail.

Add \$15.00 for each inner or outer curved guard rail

Add \$11.00 for each roller stop.

Add 50% to all cost tables if aluminum construction.

Note: For motors and drives see power belt conveyors.

ILLUSTRATIONS

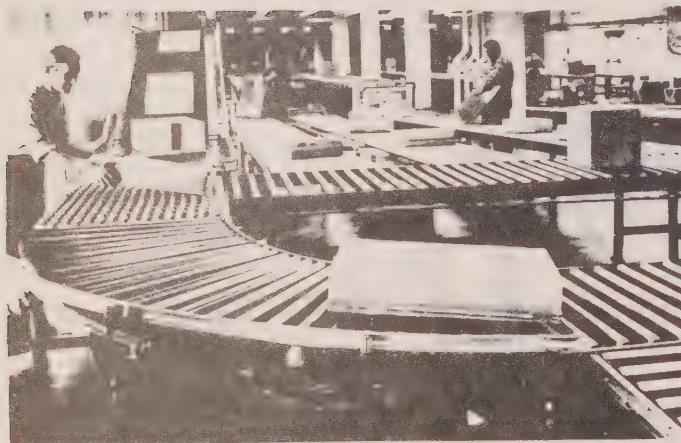
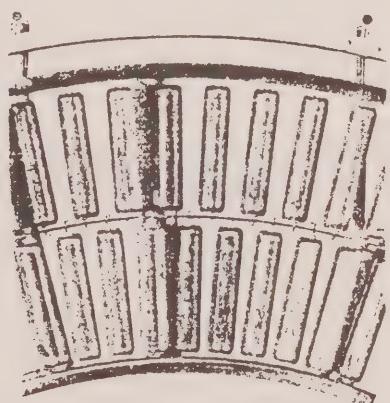


Figure 1 - 2.
Typical Roller Conveyor



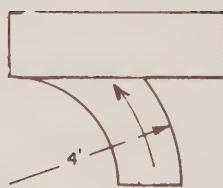
Double Lane Roller Curve

CONVEYORS

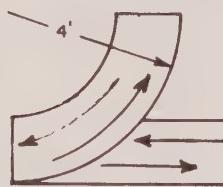
GRAVITY CONVEYORS

ILLUSTRATIONS

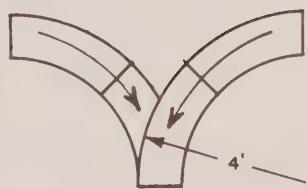
Flow Diagram of Wheel and Roller Switches



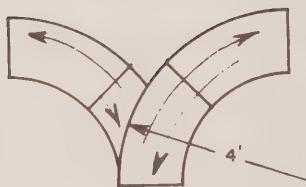
45° Spur Curve



Spur Curve Switch



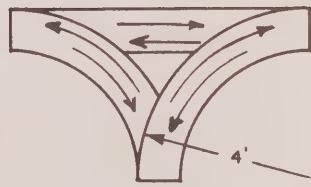
Y Curve Junction



Y Curve Switch



3 way Roller Switch Table



Spur & Y Curve Switch

CONVEYORS

POWER BELT CONVEYORS HORIZONTAL AND INCLINED BELT CONVEYORS COST TABLE FOR CONVEYOR BEDS

The following cost table includes conveyor belting, frame with supports and installation cost.

Conveyor Width	Type of Conveyor	Cost per L.F	Roller Centres				
			3"	4½"	6"	9"	12"
12"	Belt on roller conveyor	\$14.00	\$12.50	\$11.50	\$10.50	\$10.00	
12"	slider bed conveyor	\$10.50	-	-	-	-	-
12"	live roller conveyor	19.00	17.50	16.50	15.50	15.00	
12"	accumulation live roller conveyor	33.00	31.50	30.50	29.50	29.00	
# of wheels per LF of length			24	20	16	12	8
12"	accumulation wheel conveyor	\$20.00	\$18.50	\$17.50	\$16.50	\$16.00	
Add to all types of conveyors for each 3" width increase	2.00	2.00	1.50	1.50	1.50	1.50	1.50

COST TABLE FOR DRIVES

The following cost table includes drive shaft, pulley and installation cost.

Conveyor Width	4" dia. pulley	8" dia.pulley	12" dia.pulley	16" dia.pulley
12"	\$390.00	\$565.00	\$840.00	\$1640.00
Add for each 6" width increase	20.00	20.00	20.00	20.00

COST TABLE FOR END ROLLERS

The following cost table includes roller, belting and welding take up pocket to bed and installation cost.

Conveyor Width	Cost per Roller
12"	\$60.00
Add for each 6" width increase	1.50

CONVEYORS

POWER BELT CONVEYORS

Cost Table for Motor Incl. Controls
And Installation

Voltage cycle/phase	HP					
	$\frac{1}{4}$	$\frac{1}{2}$	1	2	3	5
110-550/60/1-3	\$260.	\$325.	\$420.	\$520.	\$610.	\$725.

GENERAL ADDITIVES

Noseover			Tail Feeders	
Conveyor Width	Type 1	Type 2	Length in Ft.	Price
12"	\$ 50.	\$ 70.	2'-0"	\$195.
18"	60.	85.	2'-6"	215.
24"	70.	105.	2'-6"	230.
30"	80.	120.	4'-0"	275.
36"	105.	150.	5'-0"	330.
42"	115.	165.	5'-0"	370.
48"	130.	180.	7'-6"	485.

Noseover Type 1 has a single brake and can be used up to 15° it has 1'-0" long bed section attached to one end of 2'-0" long noseover bed section.

Noseover Type 2 has a double brake and can be used up to 30° it has a 1'-0" long bed section attached to each end of 2'-0" noseover bed section.

CONVEYORS

POWER BELT CONVEYORS

GENERAL ADDITIVES

Cost Tables for Power Belt and Live Roller Curves

The following cost table includes the machinery incl. drive, motor and installation cost.

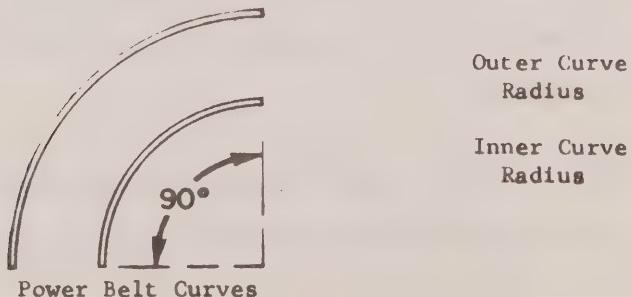
Conveyor Width	Power Belt Curves 90°				Live Roller Curves	
	Outside Radius					
	30" to 40"	50"	62"	90"		
12"	\$2000.	-	-	-	-	
18"	-	\$2200.	-	\$3250.	\$1200.	
24"	-	\$2250.	-	\$3400.	\$1300.	
30"	-	-	\$2450.	\$3500.	\$1450.	
36"	-	-	\$2600.	\$3750.	\$1600.	

Sheet Metal Guard Rails

Guard Rail Height	Straight Section	Inner Curve	Outer Curve
12"	\$1.80/LF	\$15.00 ea.	\$25.00 ea.
18"	\$2.50/LF	\$18.00 ea.	\$30.00 ea.
24"	\$3.50/LF	\$21.00 ea.	\$35.00 ea.

Add \$270.00 for each Photo Electric Eye

ILLUSTRATIONS



CONVEYORS

POWER BELT CONVEYORS

ILLUSTRATIONS

SLIDER BED
BELT CONVEYOR



INCLINED BELT ON ROLLER
CONVEYOR



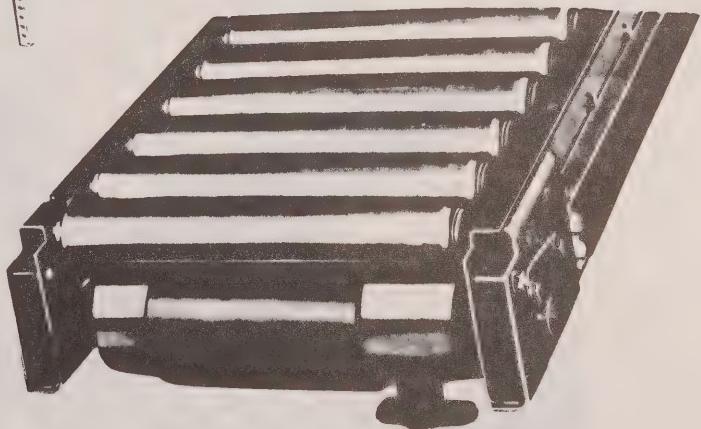
NOSEOVER
TYPE 1

DRIVE & MOTOR

TAIL FEEDER



LIVE ROLLER
CONVEYOR



CONVEYORS

POWER BELT CONVEYORS

ILLUSTRATIONS

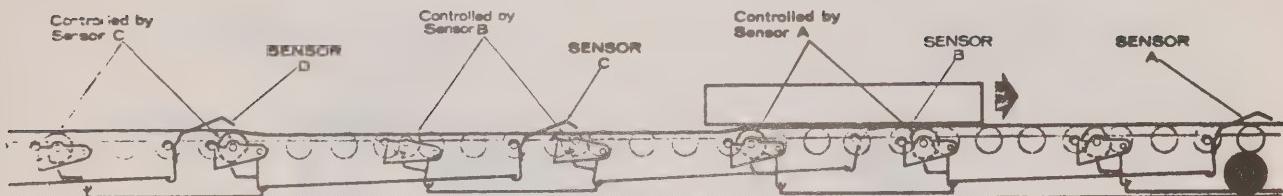


DIAGRAM OF WHEEL ACCUMULATION CONVEYOR

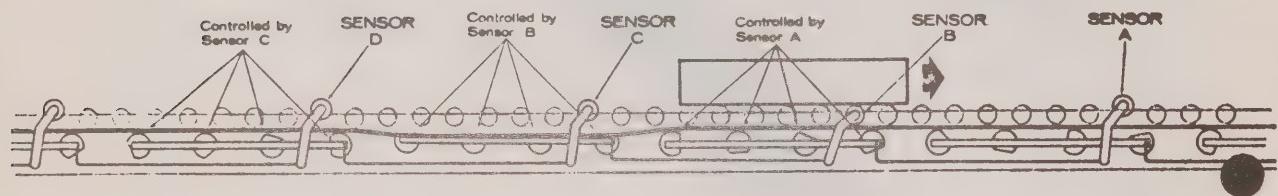


DIAGRAM OF LIVE ROLLER ACCUMULATION CONVEYORS



TOP VIEW OF WHEEL AND LIVE ROLLER ACCUMULATION CONVEYOR

CONVEYORS

POWER BELT CONVEYORS

COST TABLES FOR STEEL CHANNEL FRAMED TROUGH CONVEYORS

The following cost tables include channel frame, ball bearing idlers, loading hopper, head and tail terminals, motor and drive, decking and belting and installation cost.

18" Conveyor Belt Width			
H.P. Rating	3 H.P.	5 H.P.	7½ H.P.
Base Length	9'-0"	9'-0"	9'-0"
Cost for Base Length	\$2800.	\$2850.	\$3200.
Add for Each additional LF	\$ 39.	\$ 39.	\$ 36.

24" Conveyor Belt Width				
H.P. Rating	3 H.P.	5 H.P.	7½ H.P.	10 H.P.
Base Length	9'-0"	9'-0"	9'-0"	21'-0"
Cost for Base Length	\$2900.	\$2950.	\$3300.	\$4300.
Add for Each Additional LF	\$ 44.	\$ 45.	\$ 43.	\$ 42.

30" Conveyor Belt Width			
H.P. Rating	5 H.P.	7½ H.P.	10 H.P.
Base Length	9'-0"	9'-0"	21'-0"
Cost for Base Length	\$3000.	\$3400.	\$4500.
Add for Each Additional LF	\$ 53.	\$ 50.	\$ 43.

CONVEYORS

POWER BELT CONVEYORS

COST TABLES FOR STEEL TRUSS FRAMED TROUGH CONVEYORS

The following cost tables include steel truss frame, ball bearing idlers, loading hopper, head and tail terminals, motor and drive, decking and belting and installation cost.

18" Conveyor Belt Width						
H.P. Rating	3 H.P.	5 H.P.	7½ H.P.	10 H.P.	15 H.P.	20 H.P.
Base Length	18'-0"	18'-0"	45'-0"	84'-0"	126'-0"	210'-0"
Cost for Base Length	\$3450.	\$3500.	\$4560.	\$6650.	\$8900.	\$13,350.
Add for Each Additional LF	\$ 37.	\$ 37.	\$ 37.	\$ 37.	\$ 37.	\$ 37.

24" Conveyor Belt Width						
H.P. Rating	3 H.P.	5 H.P.	7½ H.P.	10 H.P.	15 H.P.	20 H.P.
Base Length	18'-0"	18'-0"	18'-0"	36'-0"	54'-0"	99'-0"
Cost for Base Length	\$3650.	\$3700.	\$3900.	\$5200.	\$6150.	\$8850.
Add for Each Additional LF	\$ 42	\$ 42.	\$ 42.	\$ 42.	\$ 44.	\$ 44.

30" Conveyor Belt Width						
H.P. Rating	5 H.P.	7½ H.P.	10 H.P.	15 H.P.	20 H.P.	25 H.P.
Base Length	18'-0"	18'-0"	18'-0"	30'-0"	57'-0"	81'-0"
Cost for Base Length	\$3900.	\$4150.	\$4700.	\$5550.	\$7400.	\$8750.
Add for Each Additional LF	\$ 49.	\$ 49.	\$ 49.	\$ 49.	\$ 49.	\$ 52.

CONVEYORS

POWER BELT CONVEYORS

STEEL CHANNEL & TRUSS FRAMED TROUGH CONVEYORS

ADDITIVES

Cost Table For Fixed Conveyor Supports

Height of Supports	31'-0"	26'-0"	27'-0"	32'-0"	33'-0"	34'-0"
Cost	\$220.	\$620.	\$715.	\$840.	\$905.	\$925.
Adjustment Rate per LF	\$13.00		\$25.00		-	-
Height of Supports	35'-0"	42'-0"	43'-0"	48'-0"	49'-0"	55'-0"
Cost	\$1115.	\$1295.	\$1540.	\$1640.	\$2025.	\$2190.
Adjustment Rate per LF	\$25.00		\$20.00		\$27.50	

Cost Table for Adjustable Conveyor Supports

Height Adjustment in feet	Cost
8'-6" to 12'-0"	\$ 500.
12'-6" to 18'-0"	\$ 600.
18'-6" to 24'-0"	\$ 800.
24'-6" to 30'-0"	\$ 900.
30'-6" to 36'-0"	\$1100.

Add \$5.50 for each walkway support

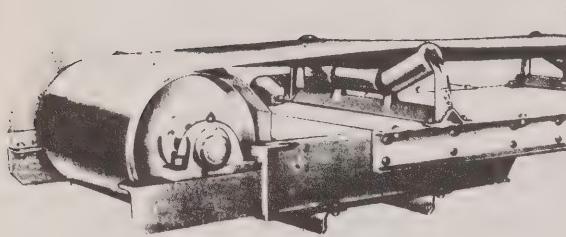
Add \$6.00 to \$7.50/LF for belt housing with width from 18" to 30"

Add \$6.50 for swivel spouts.

CONVEYORS

POWER BELT CONVEYORS

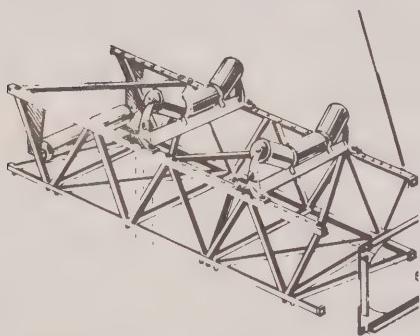
STEEL CHANNEL & TRUSS FRAMED TROUGH CONVEYORS ILLUSTRATIONS



Elevation of Channel Framed Trough Conveyor with Head Pulley



Installed Channel Framed Conveyors



Elevation of Truss Framed Trough Conveyor



Installed Truss Framed Conveyor

BELT WIDTH

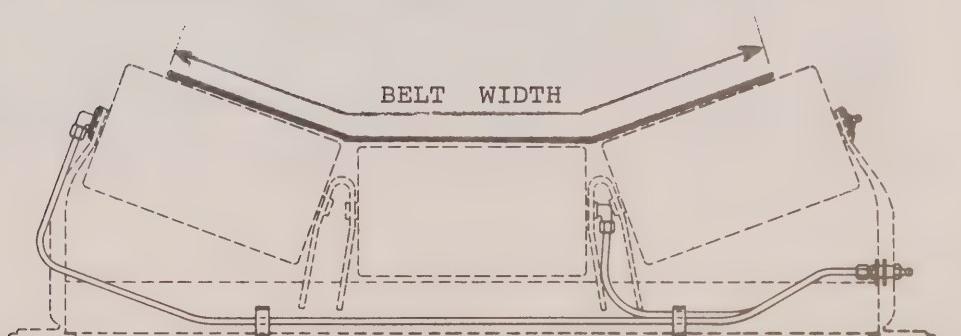


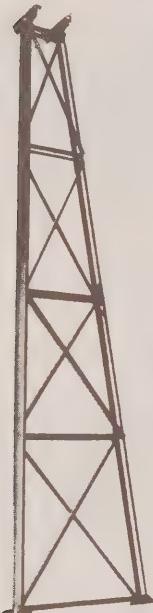
Illustration how to measure belt width.

CONVEYORS

POWER BELT CONVEYORS

STEEL CHANNEL & TRUSS FRAMED TROUGH CONVEYORS

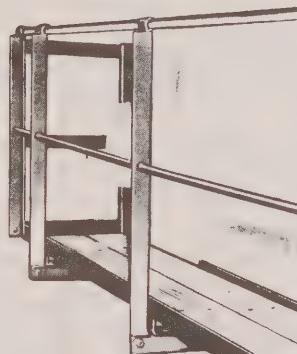
Fixed Support



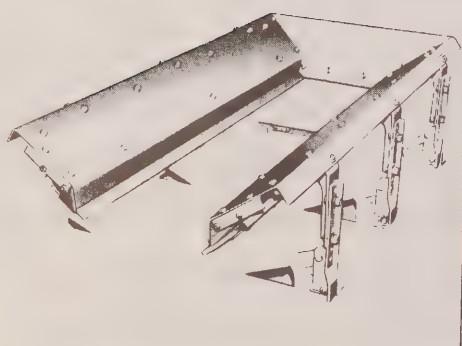
Belt Housing



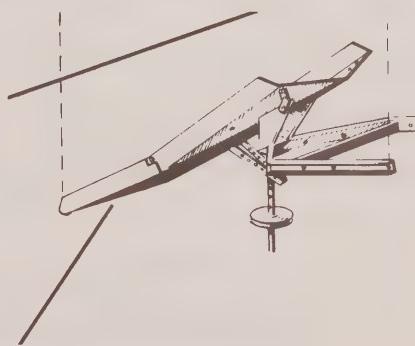
Adjustable Support



Walkway Supports



Loading Hopper



Swivel Spout

CONVEYORS

POWER AND MANUAL OPERATED OVERHEAD CONVEYORS

CONVEYOR TRACK AND CHAIN

The following cost table includes the track, chain and installation cost.

For Classifying of 228, 348, 458, 678 Conveyors see page 81.

Type of Open Overhead Trolley Conveyor				Enclosed Chain Track Conveyor	Enclosed Hand Pushed Trolley Conveyor
228	348	458	678		
\$11.00/LF	\$11.50/LF	\$12.00/LF	\$14.00/LF	\$18.00/LF	\$9.00/LF

The following cost table includes the trolleys, attachments and installation cost.

Trolley O.C	Type of Open Overhead Trolley Conveyor	228	348	458	678	Enclosed Chain Track Conveyor	Enclosed Hand Pushed Trolley Conveyor
4"	\$18.75/LF	-		-	-	\$2.25/LF	Conveyor \$33.00/LF
6"	-	\$14.00/LF		-	-	1.50	22.00
8"	9.50	-		\$11.50/LF	-	1.15	16.50
12"	6.25	7.00		-	\$22.75/LF	0.75	11.00
16"	4.75	-		5.75	-	0.55	8.25
18"	-	4.75		-	-	0.50	7.25
20"	3.75	-		-	-	0.45	6.50
24"	3.25	3.50		3.75	11.25	0.40	5.50
30"	-	2.75		-	-	-	4.50
32"	-	-		2.75	-	-	4.00
36"	-	2.25		-	7.50	-	3.75
48"	-	-		-	5.75	-	2.75

CONVEYORS

POWER AND MANUAL OPERATED OVERHEAD CONVEYORS

The following cost tables includes track bend, mounting frame rollers or traction wheel and installation cost.

Roller Turns

Degree of Arc	Type of open overhead trolley conveyor			
	228	348	458	678
60°	\$245. each	\$265. each	\$290. each	\$350. each
90°	335.	355.	380.	420.
180°	585.	635.	685.	755.

Traction Wheel Turn

Type of open overhead trolley conveyor	228	348	458	678	Enclosed Chain track conveyor
	\$420. each	\$450. each	\$475. each	\$500. each	\$550. each

The following cost tables include traction wheel or roller turns mounted on movable take-up frames operating in guides and including installation cost.

Traction Wheel Take-Up

Type of open overhead trolley conveyor	228	348	458	678	Enclosed chain track conveyor
	\$800. each	\$865. each	\$885. each	\$940. each	\$575. each

Roller Turn Take-Up

Type of open overhead trolley conveyor	228	348	458	678
	\$1150. each	\$1230. each	\$1230. each	\$1365. each

CONVEYORS

POWER AND MANUAL OPERATED OVERHEAD CONVEYORS

Cost Table for Compound Vertical Track Bends

Type of overhead trolley conveyor			
228	348	458	678
\$100. each	\$110. each	\$130. each	\$210. each

Cost Table for Horizontal Turns and Compound Vertical Curves

Enclosed chain track and push trolley conveyor			
Horizontal turns		Compound vertical curves	
Degree of Arc	Cost	Degree of Arc	Cost
Up to 90°	\$125. each	Up to 60°	\$145. each
180°	\$165. each	90°	\$215. each

Cost Table for Sprocket or Caterpillar AC Drive Units

The following cost table includes frame and machinery base track section, constant speed drive unit comprising of motor, v-belt, reducer, caterpillar drive chain. Installation included.

Capacity of chain pull in lbs.	Type of open overhead trolley conveyor				Enclosed Chain Track conveyor
	228	348	458	678	
600 lbs.	\$1700.	\$1850.	\$1850.	-	\$1950.
1200 lbs.	1950.	2150.	2150.	-	-
2900 lbs.	-	-	3100.	\$3250.	-
4000 lbs.	-	-	-	\$3750.	-

CONVEYORS

POWER AND MANUAL OPERATED OVERHEAD CONVEYORS

General Additives

For overhead trolley systems with more than one drive

Unit A balancing Unit has to be added.

Add \$2750.00 for balancing if 2 drive units per system.

Add \$3950.00 for balancing if 3 drive units per system.

Add \$5100.00 for balancing if 4 drive units per system.

Add \$1400.00 per drive for DC operation.

Add \$ 200.00 for 3:1 variable speed (Pulley Type).

Add \$1050.00 for 5:1 variable speed (Transmission Type).

Add \$2400.00 for trolley lubricator (228 to 678 conveyors).

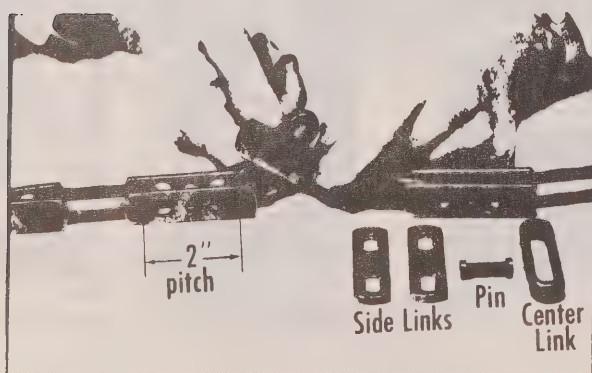
Add \$1000.00 for chain or trolley oiler (228 to 678 conveyors).

Add \$1250.00 for automatic chain oil lubricator (enclosed track conveyor).

Add \$ 150.00 for manual chain oil lubricator (enclosed track conveyor).

ILLUSTRATIONS

To determine model of 228, 348, 458, 678 overhead trolley conveyor



228 = 2" pitch & 2½" I beam

348 = 3" pitch & 3" I beam

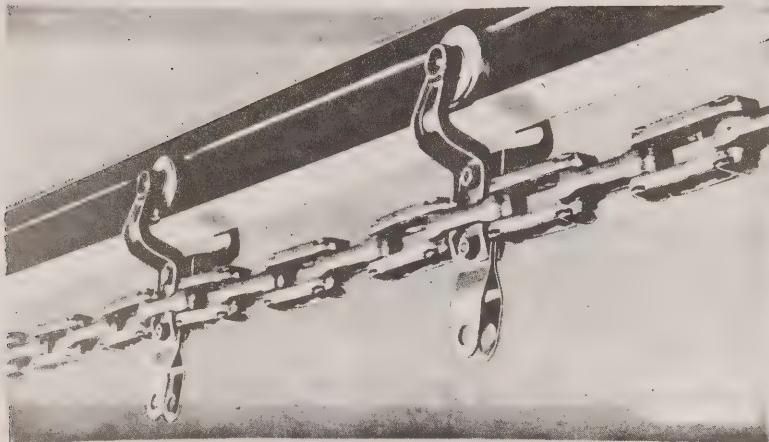
458 = 4" pitch & 4" I beam

678 = 6" pitch & 6" I beam

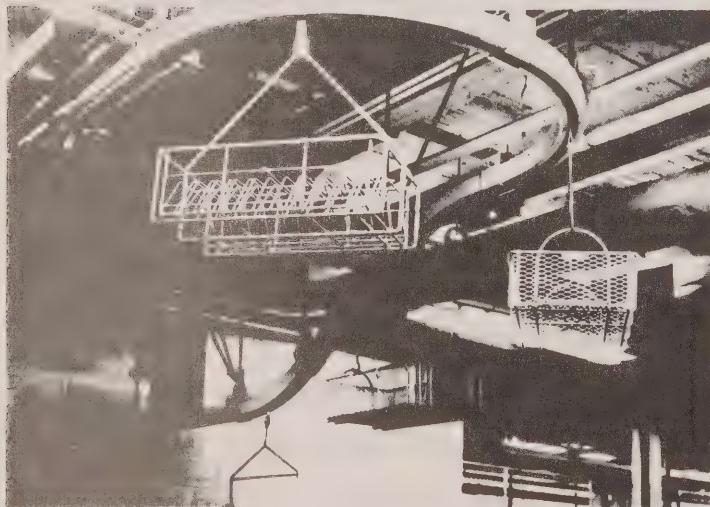
Model No. 228: The first 2 represents 2" pitch, and the 28 signifies 2/8 or 1/4" diameter pin.

CONVEYORS
POWER AND MANUAL OPERATED OVERHEAD CONVEYORS

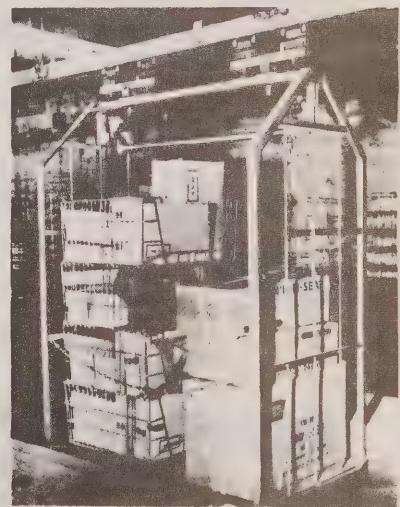
ILLUSTRATIONS



Model of 228 to 678 Overhead Trolley Conveyor



Enclosed Chain Track Overhead Conveyor

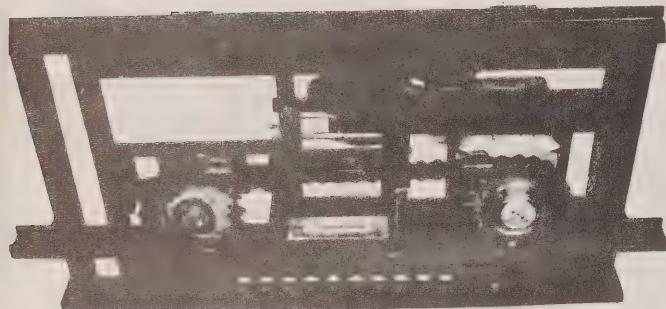


Enclosed Track Hand
Pushed Trolley Conveyor

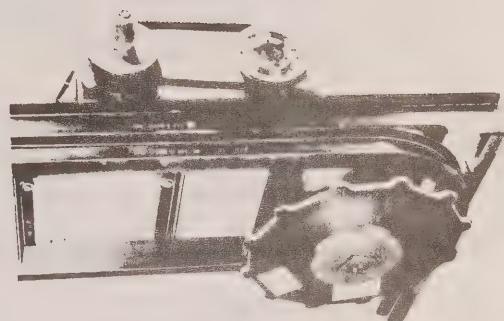
CONVEYORS

POWERED AND MANUAL OPERATED OVERHEAD CONVEYORS

ILLUSTRATIONS



Caterpillar Drive



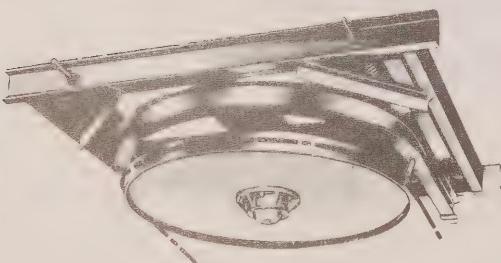
Sprocket Drive



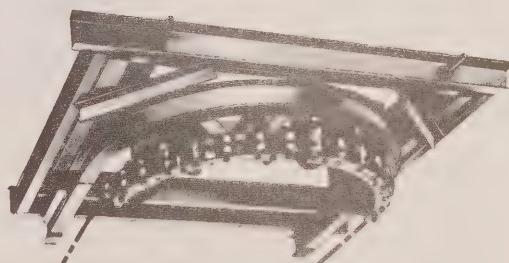
Traction Wheel Turn



Roller Turn



Traction Wheel Take-Up



Roller Turn Take-Up



Compound Vertical Curve

CONVEYORS

TABLE FOR
NORMAL PHYSICAL DEPRECIATION

Chronological Age	0 - 1	2 & 3	4 & 5	6 & 7	8 & 9	10 & 11	12 & 13	14 & 15	16 & over
% Good	70	60	50	45	40	35	30	25	20

CAMPGROUNDS

GENERAL COMMENTS

A simple definition of a campground can be stated to be a tourist or recreational establishment consisting of at least five camping sites and comprising of land used or maintained seasonally as grounds for the camping and parking of trailers and tents.

A campground is not to be confused with a trailer park, the difference being that the former has a combination of tents and trailers and operates seasonally on a licensor-licensee relationship, while the latter is primarily applicable to residential use on a year-round basis.

The land and building portions of a campground are assessed using current policy procedures. In addition, certain site improvements are to be assessed using the cost value added approach when arriving at a total estimate of market value for the campground. Specifically, these site improvements are:

- i) campsite clearance, grading and road development;
- ii) sewage disposal systems (for individual sites and for central comfort stations);
- iii) water hook-ups at each campsite;
- iv) electrical hook-ups at each campsite.

The cost figures for the above site improvements pertain to the base year of 1974.

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CAMPGROUNDS

SITE CLEARANCE, GRADING AND ROAD DEVELOPMENT

TYPE	DESCRIPTION	COST/SITE	DEPRECIATED VALUE
A	Light clearing of land, minimum levelling of site, graded for drainage. 10 foot wide roads with a few 20 foot main roads; compacted with dirt or sand; no fill used, and many roads are roughed in.	\$ 50.00	N/A
B	Medium clearing of land; average grading and levelling of site for drainage. 10 foot roads with compacted sand fill. Some roads are roughed in.	\$ 75.00	N/A
C	Extensive clearing and grubbing of land, sites are graded and levelled for good drainage. Good road structures with numerous 20 foot roads, compacted gravel fill. Very few roads are roughed in.	\$100.00	N/A

Note: No depreciation to be applied.

CAMPGROUNDS

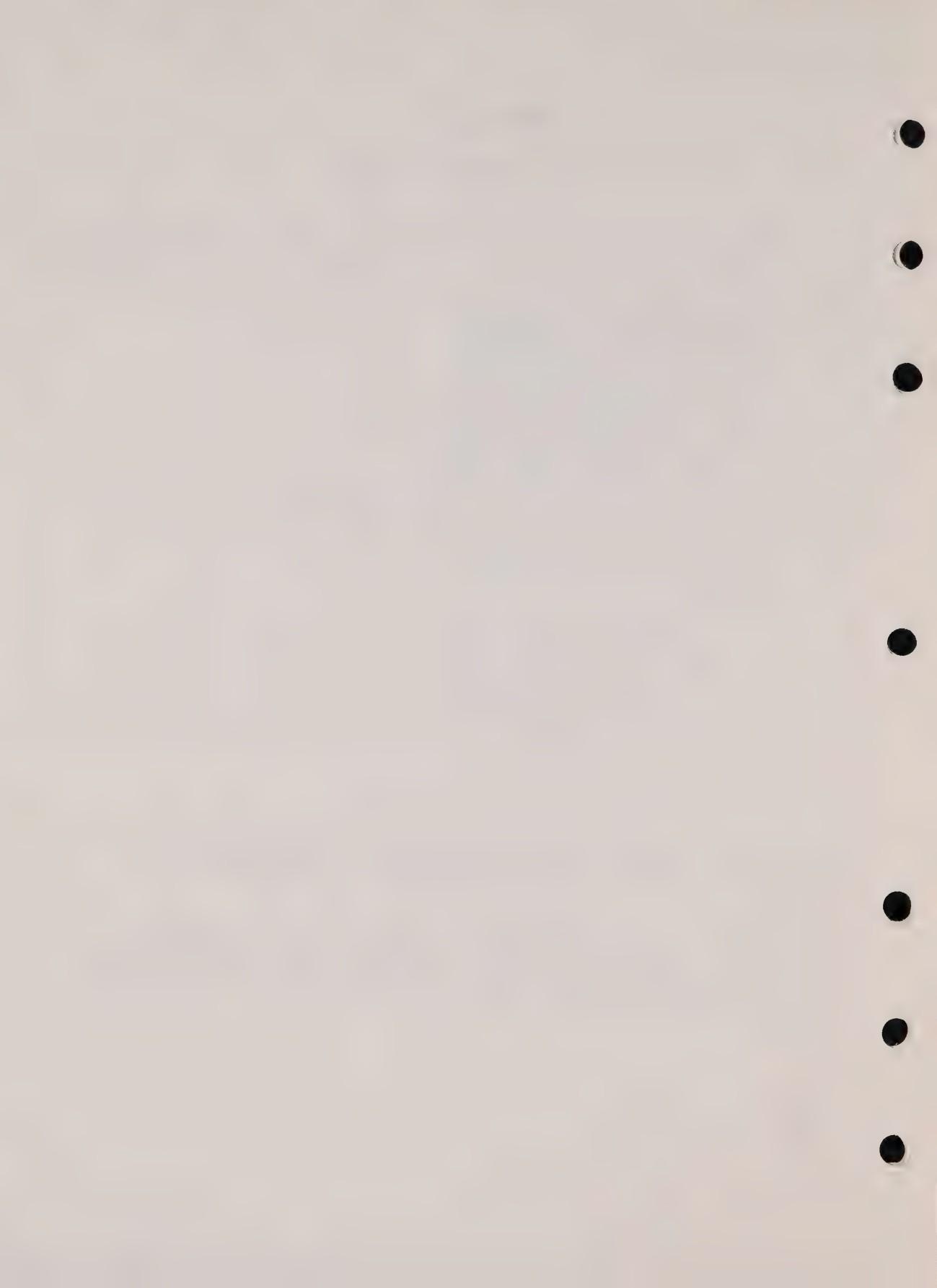
SEWAGE DISPOSAL SYSTEMS

TYPE	DESCRIPTION	COST	DEPRECIATED VALUE
A	Individual site hook-up: septic tank and leaching bed properly designed to suit the number of camp- sites it serves and the soil condition where upon the leaching bed is located; properly vented with ade- quate number of vent pipes. Total cost per site -	\$ 135.00	\$ 75.00
B	Central Comfort Station - Sewage disposal system only. a) Serving 60 unserviced campsites. (Total cost for each system) b) Serving 80 unserviced campsites. (Total cost for each system)	\$4,500.00 \$6,000.00	\$2,500.00 \$3,300.00

Note:

For Comfort Station Sewage Disposal Systems serving varying number of unserviced sites interpolate or extrapolate as required.

The above cost and depreciated values are for the sewage disposal system only. These values consist of the in-place-cost of a septic tank and tile bed. Therefore, these values do not include the building and interior fixture costs of the central comfort station.



CAMPGROUNDS

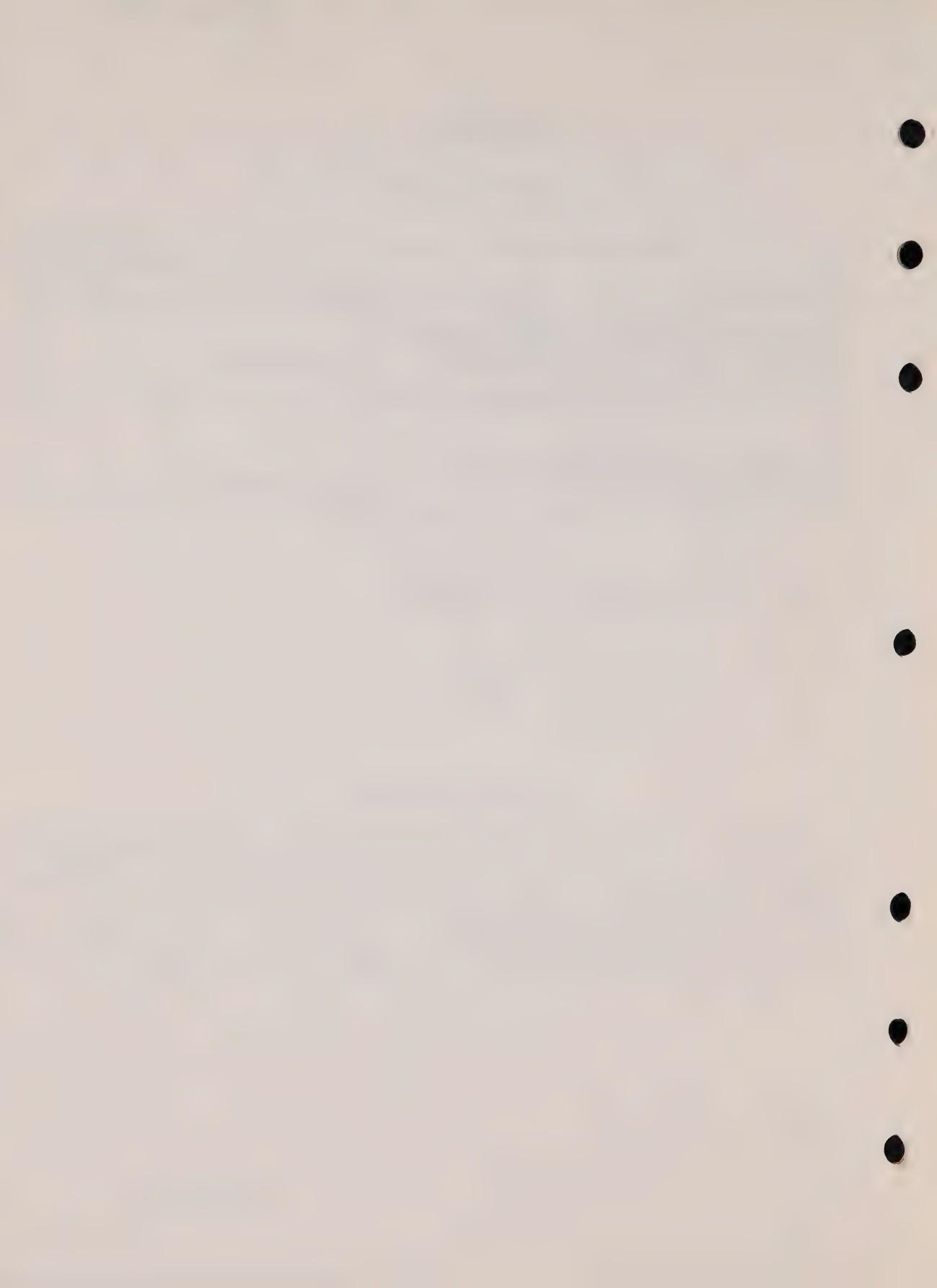
WATER FACILITY

DESCRIPTION	COST	DEFRECIATED VALUE
Individual Hook-up to each campsite: Piping system; 2" Ø main with 1/2" Ø service pipe to individual hook-up.	\$ 30.00/Site	N/A
Communal Water Sources: Taps located in areas having unserviced campsites.	\$100.00/Tap	N/A

Note: No depreciation to be applied.

ELECTRICAL HOOK-UPS

DESCPICTION	COST/SITE	DEPRECIADED VALUE
15 to 30 amperage circuits; and, simple outlet at each campsite.	\$105.00	\$75.00



ELEVATED PASSAGEWAYS & CONVEYOR HOUSINGS

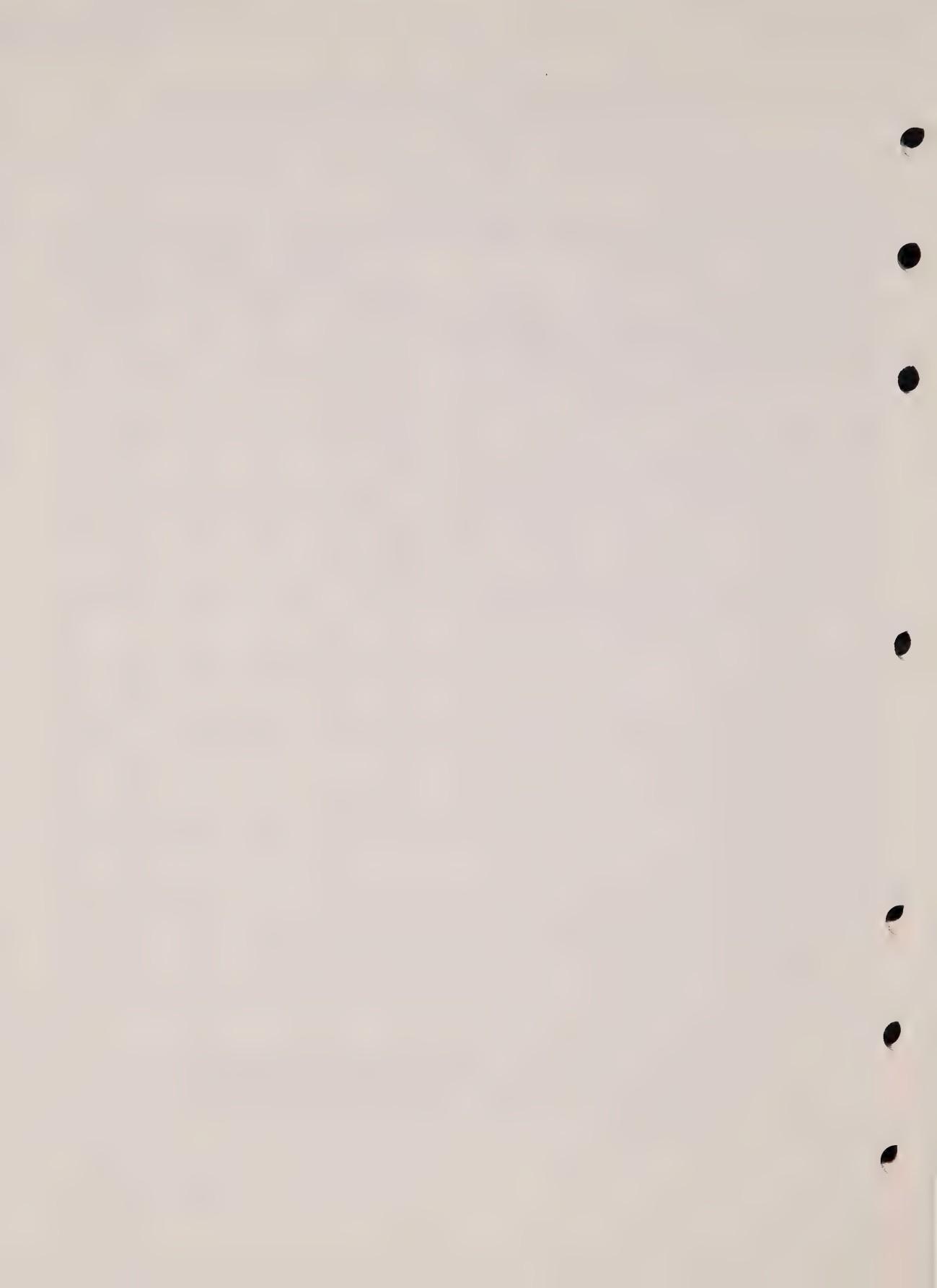
BASIC HEIGHT 8'

COST PER LIN.FT.

TYPE	DESCRIPTION	PASSAGEWAY WIDTHS				
		5'	7'	9'	12'	16'
A	Wood framed walls, floor and roof. Corrugated galvanized metal roofing and siding. Wood plank floor 1 - light fixture every 15 feet.	31.	33.	35.	39.	44.
B	Steel framed structure. Corrugated galvanized metal roofing and siding. Wood plank floor 1 - light fixture every 15 feet.	60.	65.	70.	78.	87.
C	Steel framed structure. Corrugated asbestos siding and roofing. Wood plank floor 1 - light fixture every 15 feet.	78.	84.	90.	100.	112.
D	Steel framed structure. Insulated corrugated asbestos siding with asbestos board liner. Corrugated asbestos roofing. Wood plank floor 1-light fixture every 15 feet.	86.	93.	100.	112.	125.
E	Steel framed structure. Precast walls panels, or equiv. in glazed sections. Precast conc. roof deck build-up roofing or equiv. Poured conc. elevated floor slab 4"-5" trowel finish. 1-light fixture every 8 feet.	116.	125.	135.	151.	170.

HEIGHT ADJUSTMENT: 5% PER FOOT

NOTE: Cost factors do not include heating, air conditioning, sprinklers or interior finishes. Second storey cost factors may be obtained by applying 90% of the above cost factors.



FEED MILL SPECIFICATIONS

CONST. CLASS 'D'

T Y P E 'A' (FAIR)

Concrete or masonry pier foundation. Wooden joists and 1" T and G flooring. Wooden frame with low pitched gable or shed type roof. Exterior sheathing of painted boards, ribbed metal siding or equiv. Adequate number of doors and windows. Unfinished interior. Conduit electrical wiring with dustproof fixtures and switches.

Average Life: 30 years.

T Y P E 'B' (AVERAGE)

Concrete or masonry foundation. Wooden joists with 1" diagonal sub flooring and hardwood overlay. Laminated wood frame with low pitched gable or shed type roof. Exterior sheathing of ribbed metal siding or equivalent, above a conc. block lower section. Adequate number of doors and windows. Unfinished interior. Conduit electrical wiring with dustproof fixtures and switches.

Average Life: 40 years.

T Y P E 'C' (GOOD)

Concrete foundation with re. conc. floor slab on grade. Steel frame with low pitched gable or shed roof. Exterior sheathing of metal trough siding on metal girts or equivalent. Adequate number of doors and windows. Unfinished interior. Conduit electrical wiring with dustproof fixtures and switches.

Average Life: 50 years.

FEED MILLS

COST FACTORS

CONST. CLASS 'D'

Class Shape \	TYPE A	TYPE B	TYPE C
A	5.65	7.05	5.60
B	6.10	7.60	6.05
C	6.50	8.15	6.45
Wall Height	20'	20'	20'

AREA ADJUSTMENT TABLE

800	1000	1200	1400	1600	1800	2000
1.21	1.16	1.11	1.07	1.04	1.02	1.00
2000	2300	2600	2900	3200	3600	4000
1.00	.98	.97	.96	.95	.94	.93

HEIGHT ADJUSTMENT: 1.5% for each foot of wall height variation.

FEED MILL ADDITIVES

STORAGE BINS: (Laminated 2 x 4 wood walls) Cost per Bushel \$0.50 or per cubic foot \$0.40.

For other additives which may relate to feed mill structures use cost factors which are found in Section 1C.

CONCRETE GRAIN TANK - COST FACTORS

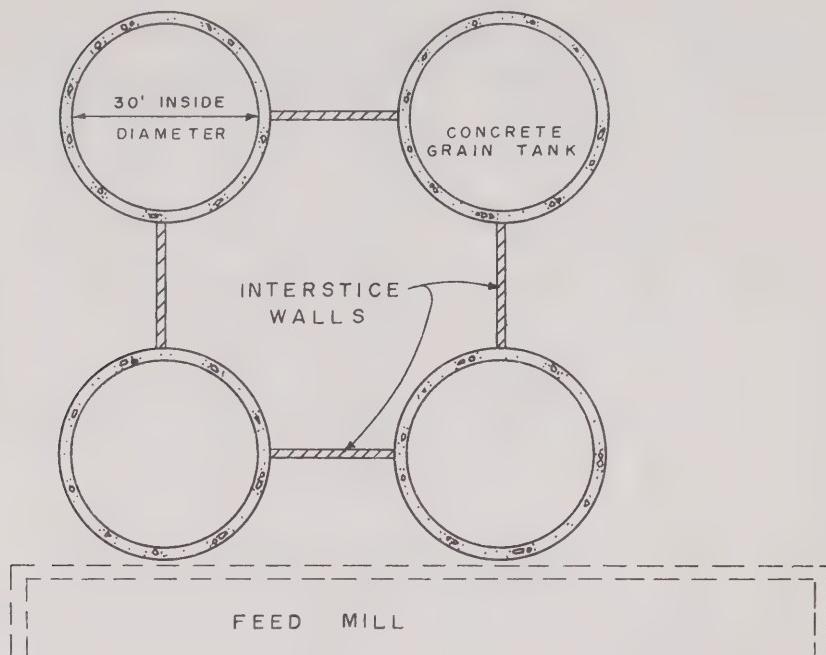
INTERIOR DIAMETER IN FEET	BUSHEL CAPACITY PER VERT. FT.	WALL COSTS		ROOF COSTS			FND'S. 8 FLOOR
		COST PER BUSHEL	COST PER VERT. FT.	*4" RE. CONC. SLAB	6" RE. CONC. SLAB	GALV. METAL DOME	
12	90.5	40.5¢	\$ 36.50	\$140	\$ 210	\$ 260	\$ 760
13	106.2	38.3¢	40.50	165	245	290	835
14	123.2	35.9¢	44.00	190	285	320	925
15	141.4	35.4¢	50.00	220	325	360	1035
16	160.8	34.9¢	56.00	250	370	400	1175
17	181.6	34.2¢	62.00	285	420	450	1305
18	203.6	33.4¢	68.00	320	470	500	1435
19	226.8	32.6¢	74.00	355	525	575	1575
20	251.3	31.9¢	80.00	390	580	650	1695
21	277.1	31.2¢	86.50	430	640	750	1850
22	304.1	30.4¢	92.50	475	705	875	1985
23	332.4	29.7¢	98.50	520	770	1025	2145
24	361.9	29.0¢	105.00	565	835	1200	2285
25	392.7	28.5¢	112.00	615	910	1400	2460
26	424.7	27.9¢	118.50	665	980	1600	2615
27	458.0	27.4¢	125.50	715	1060	1825	2780
28	492.6	26.8¢	132.00	770	1140	2050	2945
29	528.4	26.3¢	139.00	825	1220	2300	3110
30	565.5	25.8¢	146.00	885	1310	2550	3285

* COSTS of 2" x 4" laminated wood with B/U Roofing and/or steel joists, decking and B/U Roofing are similar to the cost factors for a 4" re. conc. roof slab.

NOTE: To determine the complete replacement cost of a concrete grain tank, add to the cost of the walls, using either vertical foot or bushel rates, the appropriate roof, foundation and floor costs.

e.g. A concrete grain tank 20' in diameter, 100' high has a 4" re. conc. slab roof. The R.C.N. would be \$80.00 x 100 = \$8000 + \$390 + \$1695 = \$10,085

INTERSTICE WALLS



INTERSTICE WALL - COST FACTORS

HEIGHT OF WALL IN FEET	COST PER LIN. FOOT	
	GALVANIZED METAL	6" RE-CONC.
40	\$ 45	\$ 75
50	55	90
60	70	105
70	80	120
80	90	135
90	105	150
100	115	165
110	125	180

NOTE: The above interstice wall cost factors include normal fnds.

ADDITIONAL COSTS

ROOF

- 4" Re-conc. slab: \$1.25 per sq. ft.
- 6" Re-conc. slab: \$1.85 per sq. ft.
- 2" x 4" laminated wood with B/U Roofing and/or steel joists, decking and B/U roofing: \$1.25 per sq. ft.

FLOOR SLAB

- 10"-12" Re.conc. slab on grade: \$1.85 per sq. ft.

GATEHOUSES

BASIC HEIGHT 10'

BASE AREA 300 S.F.

TYPE	DESCRIPTION	COST PER SQ.FT.
I	Reinf. Conc. or Masonry foundations. 4" R/Conc. floor slab, and A. Tile. 75% 8" conc. block walls painted. 25% steel sash glazing. Wood roof deck, 4 ply roofing. Kal. doors, adequate lighting and heating	\$ 23.00
II	Reinf. Conc. or Masonry foundations. 5" R/Conc. floor slab, Terrazzo. 60% 4" clay brick and 4" conc. block back-up, Drywall. 40% Aluminum Sash. single glazing. Steel Roof deck. Built-up Roofing. Drywall ceiling. Kal doors. Adequate lighting and heating	\$ 26.90
III	Reinf. Conc. or Masonry foundations. 5" R/Conc. floor slab, Terrazzo. 60% 4" Clay brick and 8" conc. block back-up. Drywall finish. 40% aluminum sash Dbl. glazing. Steel roof deck, Built-up roofing. Drywall ceiling. Kal. door. Adequate lighting and heating.	\$ 28.00
IV	Reinf. Conc. or Masonry foundations. 5" R/Conc. floor Quarry tile finish. 60% Pre-cast conc. panels insulated, Paint finish. 40% aluminum sash Dbl. glazing. Conc. slab roof deck, built-up roofing. Painted Kal. door. Adequate lighting and heating.	\$ 30.00

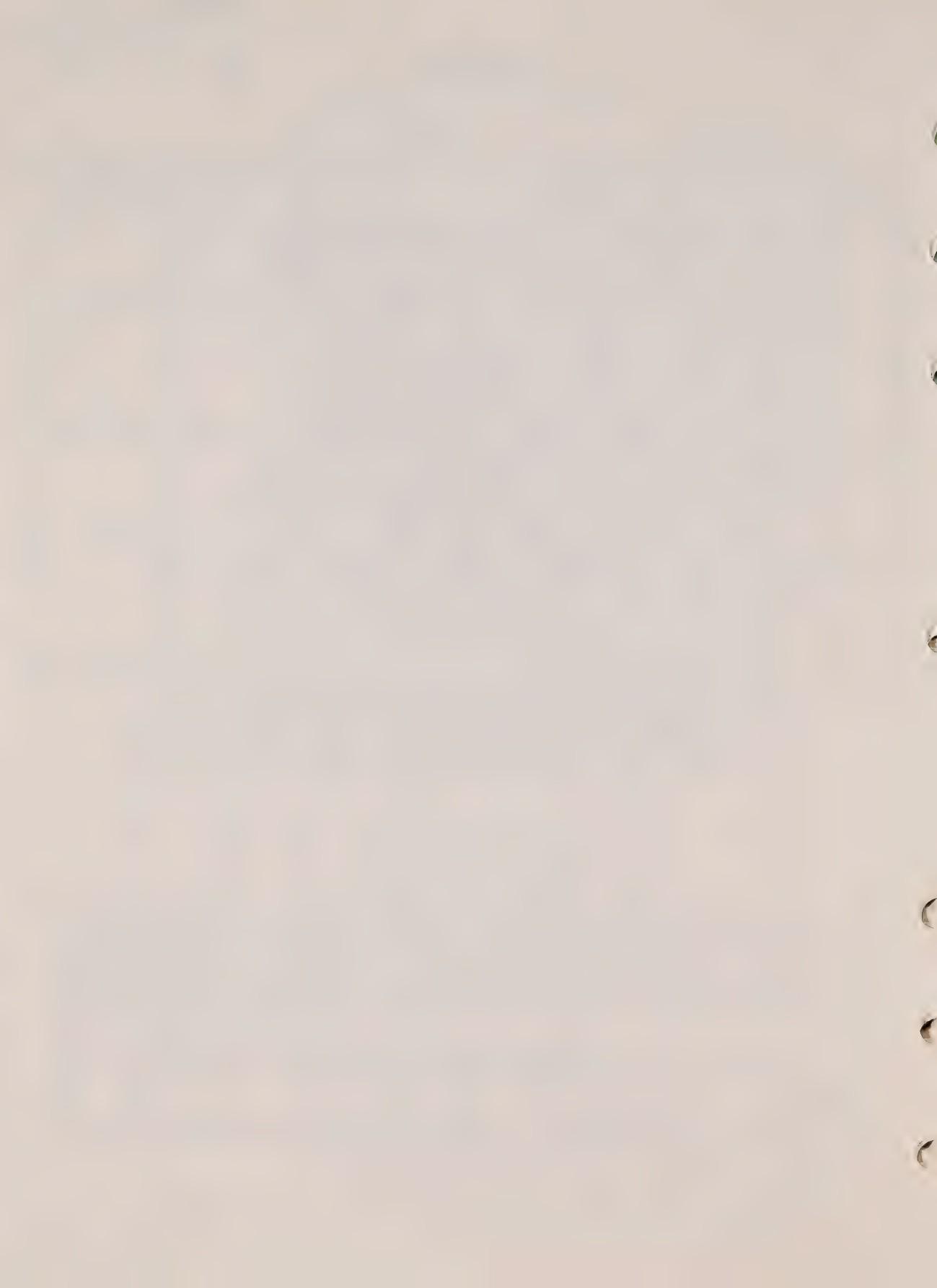
Note: Cost factors do not include sprinklers, partitions or plumbing

Height adjustment; 3% per foot for types I and IV
 $2\frac{1}{2}\%$ per foot for types II and III

AREA ADJUSTMENT TABLE

BASE AREA 300 SQ. FT.

.50	.75	.100	150	200	250	300	350	400
1.85	1.70	1.55	1.32	1.18	1.08	1.00	.94	.89
450	500	550	600	650	700	750	800	900
.85	.82	.79	.76	.73	.71	.69	.68	.66
1000	1500							
.65	.60							



GENERAL COMMENTS

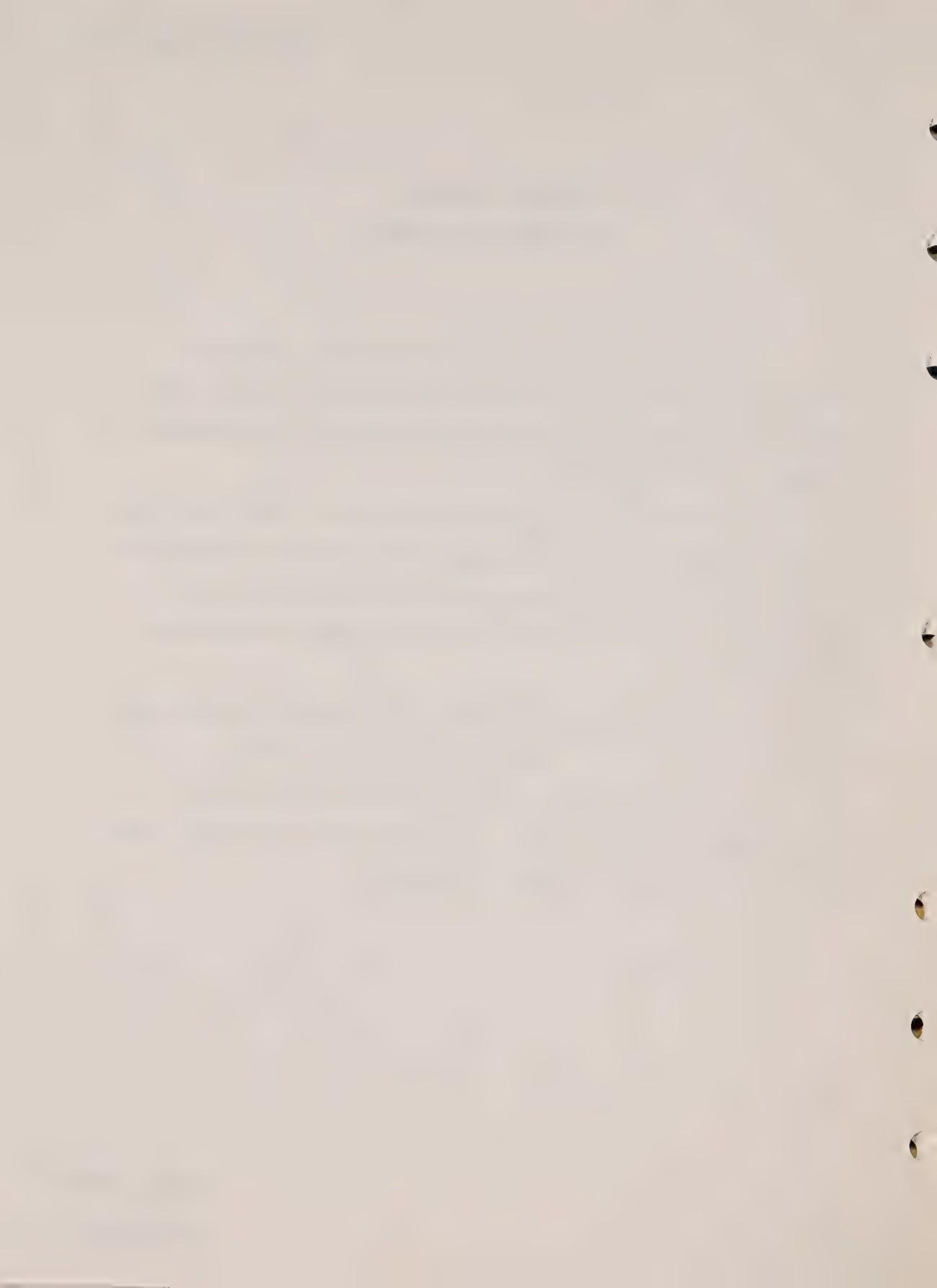
GOLF COURSE ADDITIVES

The following are the specifications and cost factors, to be applied to improvements such as Greens, Tees, and watering systems. The study regarding cost information is based on the year 1969.

Information with regard to areas of Greens and Tees can be obtained from the Greenkeeper who is usually familiar with the Golf Course. In addition, it is advisable that the assessor spot check to ensure a certain degree of accuracy is maintained.

The Practice Putting Green is a common facility and should be costed on the same basis as the Tee areas.

It is important to establish what areas have natural drainage as against those having tile and gravel, etc., as the cost variance is quite substantial.



GOLF COURSES
ADDITIVES TO LAND
GREENS

TYPE	DESCRIPTION	COST PER SQ. FT.
'A'	Constructed to Royal Canadian Association Specifications See Figure 1	\$0.80
'B'	Drained with 4" tile, surrounded by gravel and covered with 12" of prepared top soil.	0.65
'C'	Constructed on a minimum of 6" topsoil, natural drainage	0.35

TEES

TYPE	DESCRIPTION	COST PER SQ. FT.
'A'	Elevated and topsoiled with 8" of select soil mixture	\$0.45
'B'	Elevated and topsoiled with 6" of existing soil mixture	0.25

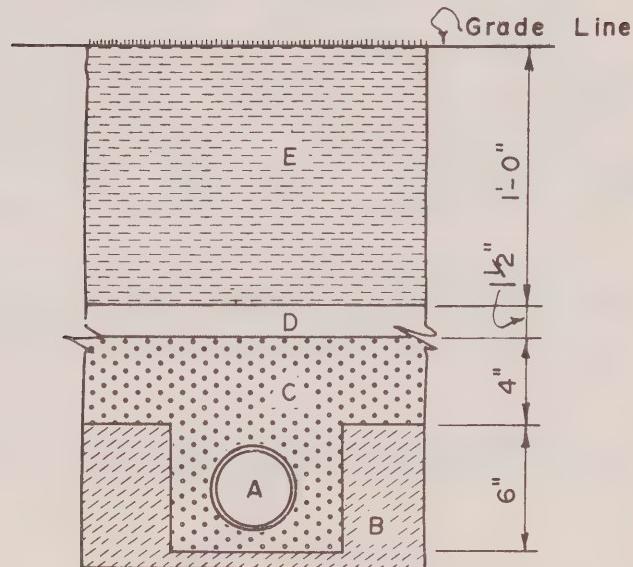
GOLF COURSES
ADDITIVES TO LAND

WATERING SYSTEMS

CLASS	DESCRIPTION	COST FACTOR
TYPE 'A'	Full automatic hoseless pop-up system for greens, tees, and fairways central and secondary control points. 6000 Yard Course 6500 Yard Course 7000 Yard Course	\$120,000 125,000 130,000
TYPE 'B'	Quick coupling hoseless, green, tee and fairway system. 6000 Yard Course 6500 Yard Course 7000 Yard Course	\$52,000 55,000 58,000
TYPE 'C'	Quick coupling as per Type 'B' with infrequent spacing requiring the use of hose lengths. 6000 Yard Course 6500 Yard Course 7000 Yard Course	\$35,000 37,000 39,000
TYPE 'D'	Green and tee system requiring hose in all areas 6000 Yard Course 6500 Yard Course 7000 Yard Course	\$18,000 20,000 22,000

GOLF COURSES
ADDITIVES TO LAND

FIGURE I
CROSS SECTION OF A PUTTING
GREEN PROFILE SHOWING A
TRENCH AND TILE LINE



- A. 4 inch diameter tile.
- B. Subgrade of native soil or fill material.
- C. Gravel--preferably pea gravel of approximately $\frac{1}{2}$ " diameter.
Minimum thickness 4 inches.
- D. Coarse sand--this sand should be of a size of 1 mm. or greater. One and one-half to two inches in thickness.
- E. Topsoil mixture. Minimum thickness of 12 inches.

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GRAIN ELEVATORS

GENERAL COMMENTS

Grain Elevators are divided into two main sections, Storage and Workhouse. The rates for both sections include the ancillary structures necessary to the operation of the plant such as offices, substations, basements, cupolas, tracksheds, etc. A mattress slab has been included in the rates but piling has not been considered. Workhouses used in conjunction with manufacturing operations, such as flour and malting plants, shall be costed on a cubic foot basis. This rate includes all those items that are normally considered additives.

As the rates are based on a modern facility, functional obsolescence, with respect to design and area, has automatically been taken into account. Railroad trackage and dockage are the only items to be added outside this section.

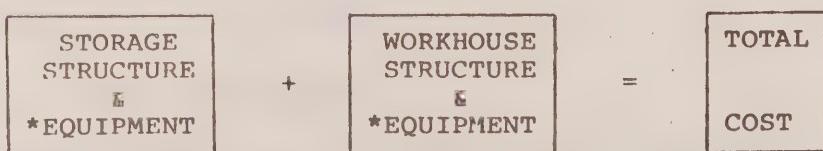
The specifications and cost factors included in this section are based on information developed from a base year of 1969.



GRAIN ELEVATORS

COMPONENTS	UNIT	STRUCTURE	EQUIPMENT
CONCRETE STORAGE	Bu.	\$0.90	\$0.20
STEEL STORAGE	Bu.	\$0.50	\$0.05
CONC. WORKHOUSE up to 150,000 Bus.	Bu.	\$5.05	\$4.95
150,000 Bus. and above	Bu.	\$4.40	\$4.25
CONC. WORKHOUSE Without Holding Bins	C.Ft.	\$0.60	---
<u>ADD</u> Automatic Car Dumpers	Ea.		\$175,000

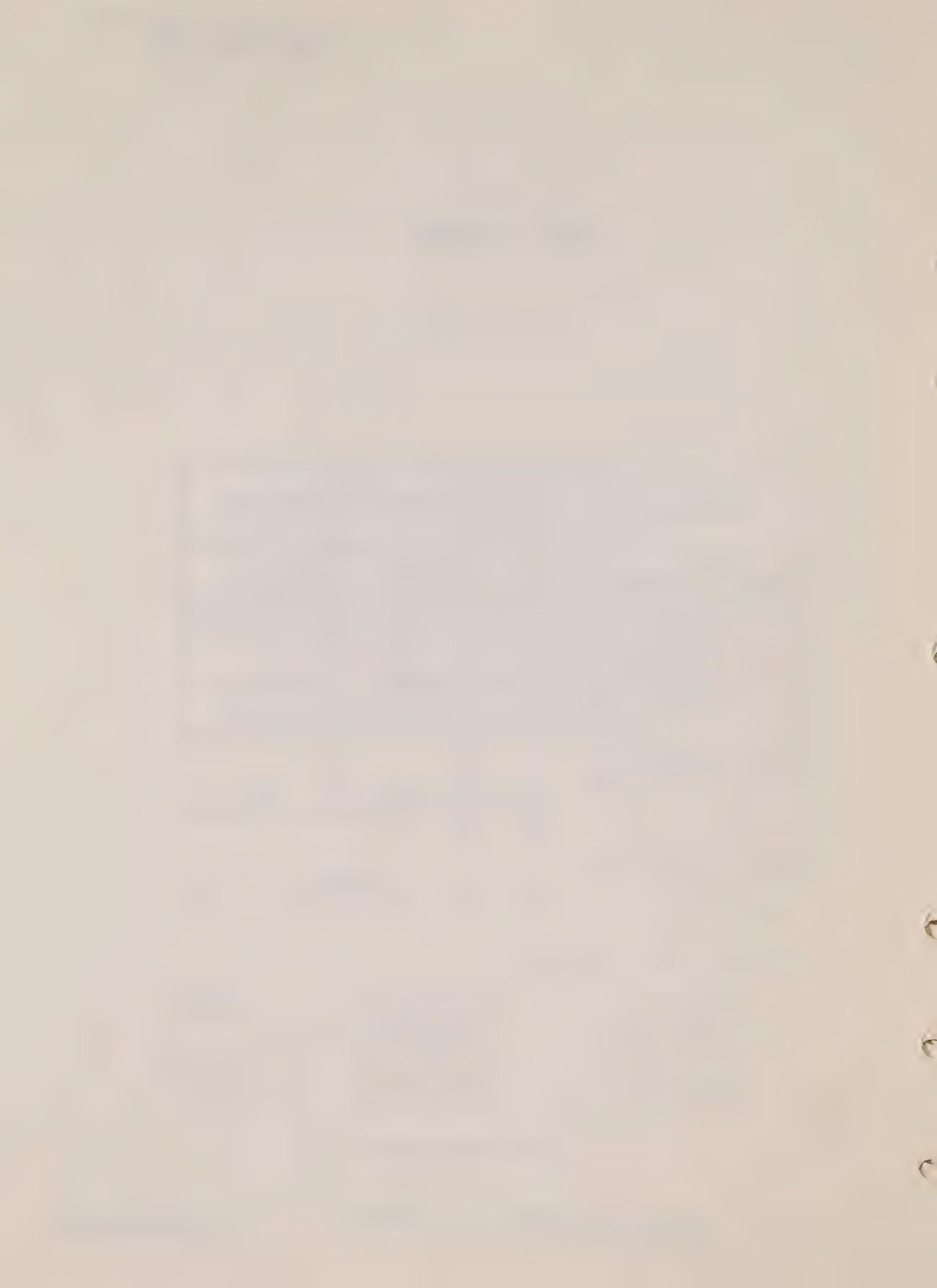
Average Life: 50 years.



* where applicable

NOTE: Equipment including car dumpers
depreciate 50%.

Issued Feb/73



SPECIAL PURPOSE INDUSTRIAL NOS. 1 AND 2

GENERAL COMMENTS

The following are specifications and cost factors for SPECIAL PURPOSE INDUSTRIAL STRUCTURES NOS. 1 and 2. The cost factors are based on the year 1969.

The design of these structures are unique in that they are engineered to suit a specific type of process and require an in-depth engineering control on site. In this context the construction project is usually administrated by project management consultants who have had considerable experience in this type of project.

Some of the main characteristics of these structures are outlined below.

EXTERIOR WALLS

Insulated and uninsulated metal and asbestos sidings, masonry and/or precast concrete panels.

STRUCTURAL STEEL

The structural steel is usually clear spans, heavy columns, beams and/or trusses. The cost factors allow for only structural steel calculated to support the building exclusive of equipment. These buildings vary greatly in height, averaging from 40 feet to 140 feet, which in design character create above normal steel tonnage built into the structures to withstand vibration and wind velocities etc.

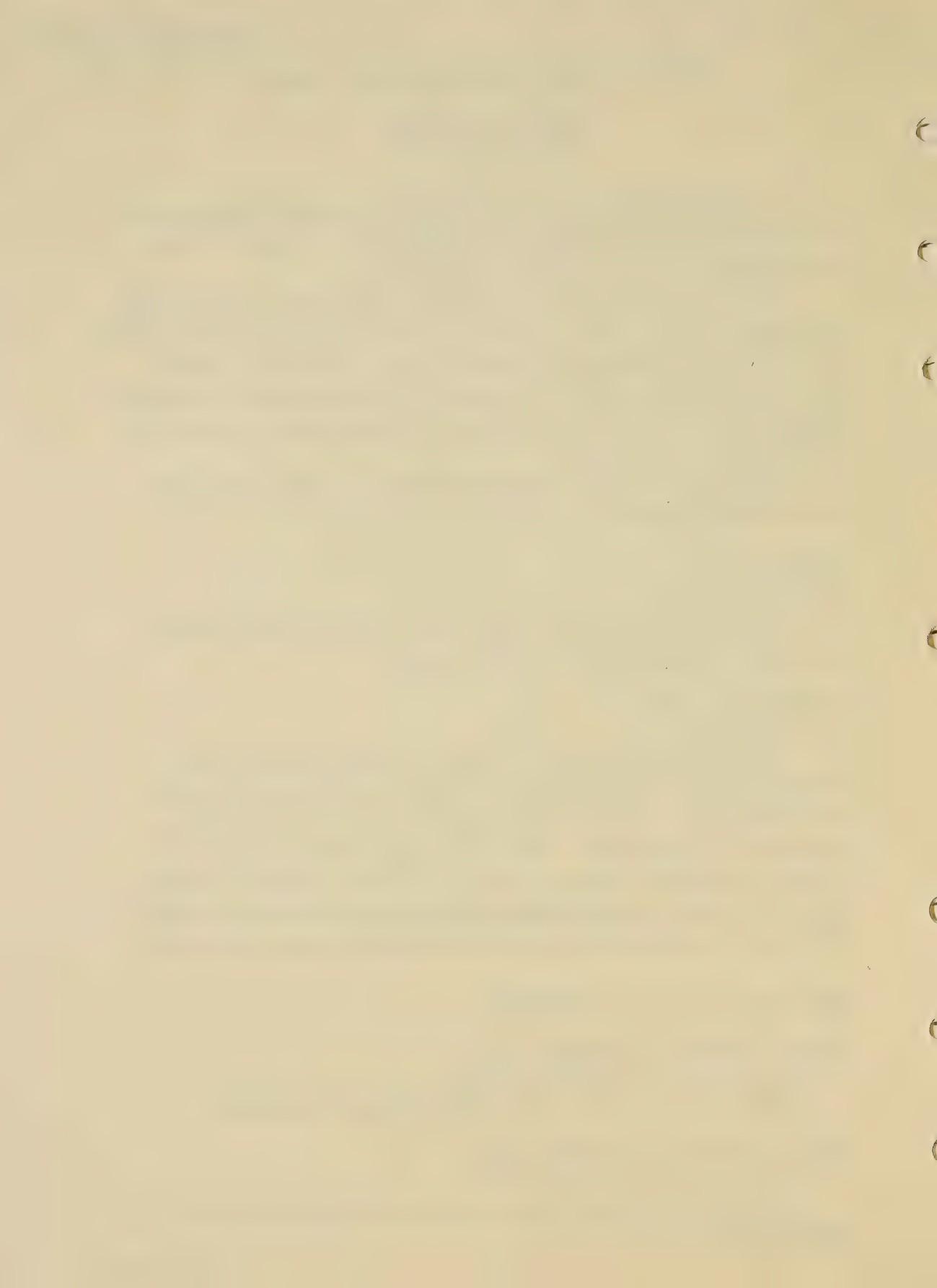
RECOMMENDED USE IS AS FOLLOWS:

SPECIAL PURPOSE INDUSTRIAL NO. 1

Pulp & paper mills and other related industries.

SPECIAL PURPOSE INDUSTRIAL NO. 2

Smelters, concentrators and other related mining industries.



SPECIAL PURPOSE INDUSTRIAL NO. 1

SECTION 9C PAGE 1-2

B6 Year 19

CLASS	COMPONENT	3	4	5	6
<u>EXCAVATION & FOUNDATIONS</u>	Reinf. conc. piers & footings. As per Nat. Code. Normal design load. (No perimeter fndt.)	Site & struct. excavation 8" conc. block as per Nat. Code. Normal design load.	Site & struct. excavation 10" reinf. conc. as per Nat. Code. Hvy. design load.	Site & struct. excavation 12" reinf. conc. as per Nat. Code. Heavy design load.	Site & struct. excavation 6" conc. slab bar reinf. on good compacted gravel base.
<u>FLOOR</u>	4" conc. slab mesh reinf. on good compacted base.	5" conc. slab mesh reinf. on good compacted gravel base.	5" conc. slab bar reinf. on good compacted gravel base.	6" conc. slab bar reinf. on good compacted gravel base.	6" conc. slab bar reinf. on good compacted gravel base.
<u>STRUCTURAL STEEL</u>	15' x 20' bay size. Full stl. frame. Heavy duty load. Angle iron cross bridging.	20' x 25' Full stl. fr. Heavy duty loading. Angle iron cross bridging.	Bay size 20' x 40' Full stl. fr. col. beam trusses, heavy design loading. Vert. & horiz. angle bracing. Box truss bridging.	Bay size 20' x 50' Full stl. fr. beam trusses, heavy design loading. Vert. & horiz. angle bracing. Box truss bridging.	Bay size 20' x 50' Full stl. fr. col. beam trusses. Heavy design loading. Vert. & horiz. angle bracing. Good spray paint.
<u>WALLS</u>	26 ga. colour. Corr. galv. siding. or equiv.	8" C.B. or equiv. in metal sidings.	10" masonry. 75% C.B. 25% brick and C.B. or metal and asbestos sidings.	12" masonry. 50% brk. & C.B. 50% C.B. or equiv. in ave. gauge sidings.	12" masonry. 50% brk. & C.B. 50% C.B. or equiv. in ave. gauge sidings.
<u>ROOF & ROOFING</u>	Corr. galv. metal roofing or equiv.	Corr. galv. metal roofing or equiv.	Hvy. gal. stl. deck 1½ rigid insul. F.T.G.	Hvy. gal. stl. deck 1½ rigid insul. F.T.G.	Hvy. gal. stl. deck 1½ rigid insul. F.T.G.
<u>DOORS</u>	Corr. galv. metal angle framed sliding doors.	Met./clad Ped. and sliding doors. Low cost.	Wood OH doors and pedestrian doors. Chain operat.	Wood glass panel OH door, elect. operat. Ped. doors.	Wood glass panel OH door, elect. operat. Ped. doors.
<u>WINDOWS</u>	Low cost translucent.	Low cost. Translucent panels.	20% translucent panels.	20% translucent panels.	20% translucent panels.
<u>ELECTRICAL</u>	Incand. low cost. • 50 watts	Rigid cond. incand. • 75 watts	Rigid cond. ave. • 75 watts	Rigid conduit. Ave. qual. fluor. fix. 1 watt	Rigid conduit vaporproof outlets. Ave. qual. fluor. fix. 1 watt
<u>RAINAGE</u>	Ave. floor and roof drains.	Ave. floor and roof drains.	Ave. floor and roof drains.	Ave. floor and roof drains.	Ave. floor and roof drains.
<u>PLUMBING</u>	Minimum plumbing facilities.	Inadequate plumbing facilities.	Inadequate plumbing facilities.	Inadequate plumbing facilities.	Inadequate plumbing facilities.

SPECIAL PURPOSE INDUSTRIAL NO. 1

SECTION 9C PAGE I-3
BA Year 19/

COMPONENT	CLASS	7	8	9	10
<u>EXCAVATION & FOUNDATIONS</u>		Site & struct. excav. 12" reinf. conc. as per Nat. Code. Heavy design interior & exterior footings & piers.	Site & struct. excav. 14" reinf. conc. as per Nat. Code. Heavy design interior & exterior footings & piers.	Site & struct. excav. 14" reinf. conc. as per Nat. Code. Heavy design interior & exterior footings & piers.	Site & struct. excav. 16" reinf. conc. as per Nat. Code. Heavy design interior & exterior footings & piers.
<u>FLOOR</u>		7" conc. slab bar reinf. on good compacted gravel base. Metallic hardener.	8" conc. slab bar reinf. on good compacted gravel & sand base. Met. hardener.	9" conc. slab bar reinf. on good compacted gravel & sand base. Met. hardener.	12" conc. slab bar reinf. on good compacted gravel & sand base. Met. hardener.
<u>STRUCTURAL STEEL</u>		Bay size 30' x 50': Full stl. fr. col. beam & trusses heavy design loading. Vert. & horiz. angle bracing. Good spray paint.	Bay size 30' x 60': Full stl. fr. col. beam & trusses heavy design loading. Vert. & horiz. angle bracing. Good spray paint.	Bay size 25' x 80': Full stl. fr. col. beam & trusses heavy design loading. Vert. & horiz. angle bracing. Good spray paint.	Bay size 40' x 80': Full stl. fr. col. beam & trusses heavy design loading. Vert. & horiz. angle bracing. Good spray paint.
<u>WALLS</u>		Heavy ga. insul. sandwich panels or equiv. Asbestos or metal. Cut-up for vents.	Box truss bridging.	Box truss bridging.	Box truss bridging.
<u>ROOF & ROOFING</u>		Haydite pre-cast conc. deck. F.T.G. roof cut-up for vents.	Pre-cast conc. wall panels. Some Hwy. ga. met. sandwich panels.	Pre-cast conc. deck or asbestos cavity deck F.T.G. or equiv.	Pre-cast conc. deck. F.T.G. flood roof or equiv.
<u>DOORS</u>		Elect. or roll-up stl. doors. Heavy duty. Hollow met. ped. doors.	Multiple doors. Oper. Good quality ped. doors.	Many multiplex doors. Elec. oper. Good quality ped. doors.	Many multiplex doors. Elec. oper. Good quality ped. doors.
<u>WINDOWS</u>		Good quality translucent panels 208	108 translucent panel	108 translucent panel	108 translucent panel
<u>ELECTRICAL</u>		Good quality vaporproof outlets. Rigid conduit and merc. vapour.	Good quality vaporproof outlets and merc. vapour.	Good quality vaporproof outlets. Merc. vapour fixt. Rigid conduit.	Good quality vaporproof outlets. Merc. vapour lighting. Rigid conduit
<u>RAINAGE</u>		1.50 watts	1.75 watts	2 watts	2 watts
<u>LUMBING</u>		Good trough floor drains & roof drains.	Good trough floor and roof drains.	Many good trough floor drains & roof drains.	Many good trough floor drains & roof drains.

SPECIAL PURPOSE INDUSTRIAL NO. 1

(STEEL FRAME)

10,000 SQ.FT. BASE

CONST. CLASS "C"

CLASS SHAPE \	3	4	5	6	7	8	9	10
A	8.85	9.90	11.50	12.50	13.85	15.35	16.30	18.05
B	9.20	10.60	12.05	13.30	14.80	16.20	17.30	18.95
C	9.60	11.10	12.80	14.15	15.60	16.95	18.30	20.05
STOREY HT.	20'	20'	20'	20'	20'	20'	20'	20'

AREA ADJUSTMENT TABLE

10,000 SQ.FT. BASE

CONST. CLASS "C"

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75
200,000	300,000	500,000	1,000,000	2,000,000	3,000,000		
.73	.72	.70	.69	.68	.62		

FOR EACH FOOT OF VARIATION IN HEIGHT ADJUST ABOVE COST FACTORS BY 3%

FOLLOW SAME RULES AS 1C P9 FOR METAL CLAD EXTERIOR.

SPECIAL PURPOSE INDUSTRIAL NO. 2

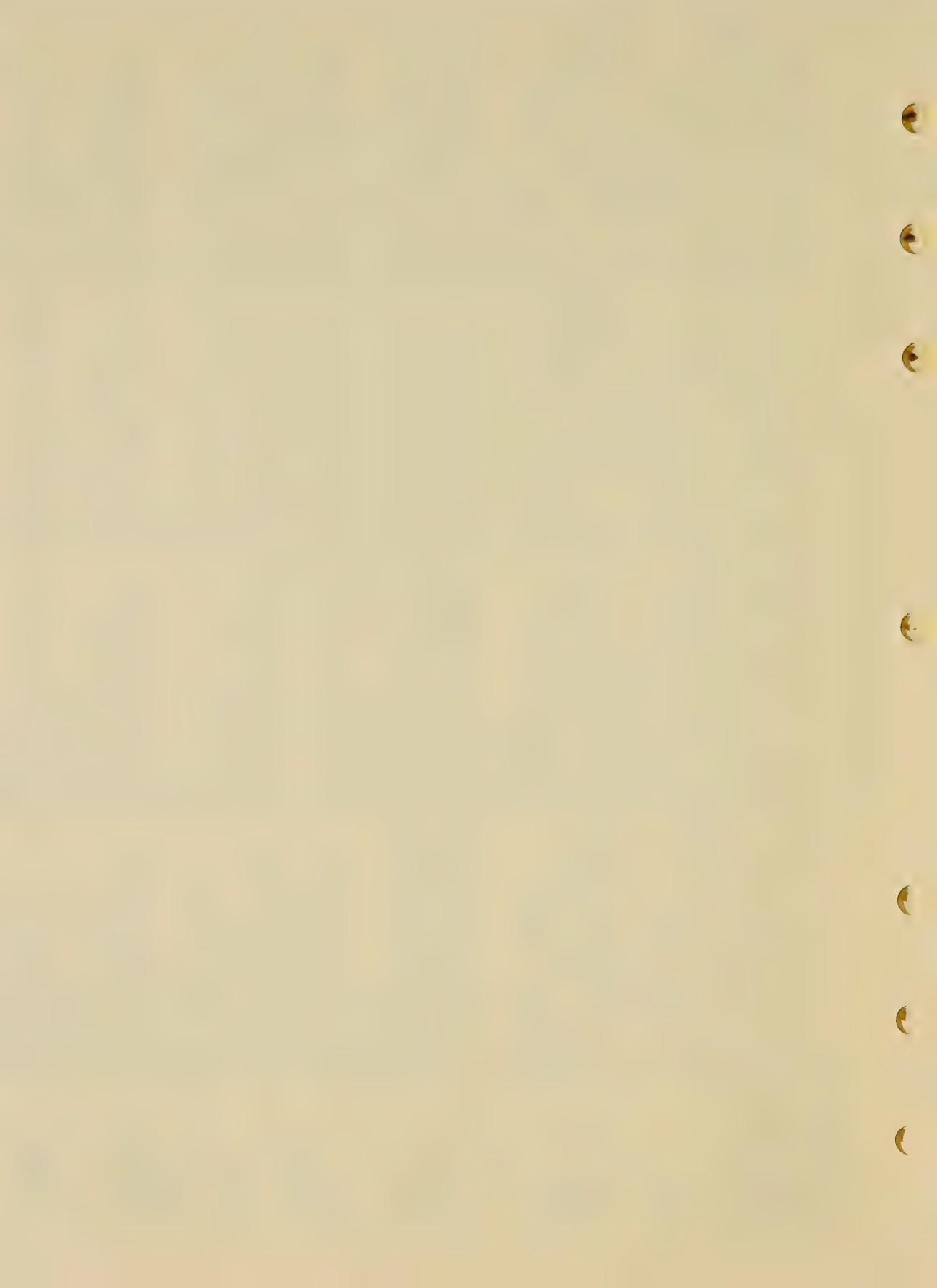
SECTION 9C PAGE I-5
Ba Year 19

COMPONENT	C.L.S	3	4	5	6
<u>EXCAVATION</u>	Normal site clearing & pier excavation.	Site & struct. excavation 8" reinf. conc. fdn.	Site & struct. excavation 10" reinf. conc.		
<u>FOUNDATION</u>	Heavy reinf. conc. piers. Spread footings.	Heavy reinf. conc. piers. Spread footings.	Heavy reinf. conc. fdn.		
<u>FLOOR</u>	6" conc. slab mesh reinf. on gravel fill. Base good compacted.	7" conc. slab. Mesh reinf. on gravel fill base. Good compacted.	8" conc. slab. bar reinf. on good compacted gravel fill base.	9" conc. slab bar reinf. on good compacted gravel fill.	
<u>STRUCTURAL STEEL</u>	15' x 20' bay size. Heavy steel col's. beams & trusses. Vert. & horiz. angle bracing.	20' x 25' bay size. Heavy steel col's. beams & trusses. Vert. & horiz. angle bracing.	20' x 40' bay. Heavy steel col's./beams & trusses. Vert. & horiz. angle bracing. Trussed bridging.	20' x 50' bay. Heavy col's. beams & trusses. Vert. & horiz. angle bracing. Trussed bridging. Spray painted.	
<u>EXTERIOR WALLS</u>	26 ga. corr. siding or equiv.	508 8"-10" conc. blk. 508 coloured metal sidings or equiv.	22 ga. colour corr. metal sidings or equiv. insul. polyethylene 8' high metal liner.	22 ga. insul. colour met. siding. Lt. ga. metal back panel or 8" struct. tile or equiv. in asbestos.	
<u>ROOF ROOFING</u>	26 ga. corr. metal roofing.	24 ga. corr. metal roofing.	Heavy ga. stl. deck 1½" rigid insul. 4 ply f.t.g. flashing etc.	Heavy ga. stl. deck 1½" rigid insul. etc. 4 ply f.t.g. flashing.	
<u>FLOORS</u>	Corr. galv. metal angle iron frame. Manual sliding.	Met/clad Ped. and sliding doors.	Wood sect. O.H. doors chain oper. met. ped. doors.	Wd. sect. glass panel O.H. doors elect. oper. met. ped doors.	
<u>WINDOWS</u>	Low cost. Translucent minimum.	Low cost. Translucent minimum.	208 translucent panels.	208 translucent panels.	
<u>ELECTRICAL</u>	Incandescent Rigid conduit.		Rigid conduit. Ave. industrial fluorescent	Rigid conduit dust-proof outlets. Industrial fluor. Some mercury.	
	1.50 watts	1.50 watts	1.50 watts	1.75 watts	
<u>DRAINAGE</u>	Ave. floor & roof drains.	Ave. floor & roof drains.	Ave. floor & roof drains.	Ave. conc. floor through drains & ave. roof drains.	
<u>PLUMBING</u>	Minimum plumbing facilities.	Minimum plumbing facilities.	Minimum plumbing facilities.	Adequate Plumbing facilities.	

SPECIAL PURPOSE INDUSTRIAL NO. 2

SECTION 9C PAGE I-6
Base Year 1969

COMPONENTS	Clas-s	7	8	9	10
<u>EXCAVATION</u>		Site & struct. excavation. 12" reinf. conc. fdn. Heavy reinf. conc. piers. Spread footings. piers. Spread footings.	Site & struct. excavation. 14" reinf. conc. fdn. Heavy reinf. conc. piers. Spread footings. piers. Spread footings.	Site & struct. excavation. 14" reinf. conc. fdn. Heavy reinf. conc. piers. Spread footings. piers. Spread footings.	Site & struct. excavation. 16" reinf. conc. fdn. Heavy reinf. conc. piers. Spread footings. piers. Spread footings.
<u>FOUNDATION</u>					
<u>FLOOR</u>		9" conc. slab bar reinf. two-way on good compacted gravel fill. Met. hardener.	10" conc. slab bar reinf. two-way on good compacted gravel fill. Met. hardener.	11" conc. slab bar reinf. two-way on good compacted gravel fill. Met. hardener.	12" conc. slab bar reinf. two-way on good compacted gravel fill. Met. hardener.
<u>STRUCTURAL STEEL</u>		30' x 50' bay. Heavy col's. beams & trusses. vert. & horiz. angle bracing. Trussed bridging. Spray painted.	30' x 60' bay. Heavy col's. beams & trusses. vert. & horiz. angle bracing. Trussed bridging. Spray painted.	25' x 80' bay. Heavy col's. beams & trusses. vert. & horiz. angle bracing. Spray painted.	40' x 80' bay. Heavy col's. beams & trusses. vert. & horiz. angle bracing. Spray painted.
<u>EXTERIOR WALLS</u>		Heavy duty asbestos & metal sandwich panels corr. flat back asbestos liner or equiv. in masonry.	Heavy duty asbestos & metal sandwich panels corr. flat back asbestos liner or equiv. in masonry.	Heavy duty asbestos & metal sandwich panels corr. flat back asbestos liner or equiv. in masonry.	Heavy duty asbestos & metal sandwich panels corr. flat back asbestos liner or equiv. in masonry.
<u>ROOF ROOFING</u>		Pre-cast conc. deck insul. 4 ply f.t.g. cut-up for vents.	Pre-cast conc. deck 4 ply f.t.g. or equiv.	Pre-cast conc. deck f.t.g. flood roof or equiv. 5 ply cut-up for vents.	Pre-cast conc. deck f.t.g. flood roof or equiv. Cut-up for vents. (5 ply)
<u>FLOORS</u>		Steel roll-up elect. oper. doors. H.M. ped. doors.	Multiplex doors. Elect. oper. Good quality ped. doors.	Many multiplex doors. Elect. oper. Good quality ped. doors.	Many multiplex doors. Elect. oper. Good quality ped. doors.
<u>WINDOWS</u>		20% translucent panels.	10%	10%	10%
<u>ELECTRICAL</u>		Rigid conduit dust-proof outlets. Merc. vap. some fluor. 2 watts.	Rigid conduit dust-proof outlets. Merc. vap. some fluor. 2.2 watts.	Rigid conduit dust-proof outlets. Merc. vap. some fluor. 2.5 watts.	Rigid conduit dust-proof outlets. Merc. vap. some fluor. 2.7 watts.
<u>DRAINAGE</u>		Good conc. floor. Trough drains. Good roof drains.	Good conc. floor drains. Good roof drains.	Many good trough floor drains & roof drains.	Many good trough floor drains & roof drains.
<u>PLUMBING</u>		Good plumbing facilities.	Good plumbing facilities.	Good plumbing shower & locker facilities.	Good plumbing shower & locker facilities.



SPECIAL PURPOSE INDUSTRIAL NO. 2
(STEEL FRAME)

10,000 SQ.FT. BASE

CONST. CLASS "C"

CLASS SHAPE \	3	4	5	6	7	8	9	10
A	11.70	12.90	15.20	16.40	18.20	20.30	21.40	23.85
B	12.10	13.90	15.90	17.55	19.60	21.50	22.85	25.00
C	12.65	14.55	17.00	18.75	20.55	22.45	24.25	26.45
STOREY HT.	20'	20'	20'	20'	20'	20'	20'	20'

AREA ADJUSTMENT TABLE

10,000 SQ.FT. BASE

CONST. CLASS "C"

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.30	1.22	1.17	1.13	1.10	1.07	1.04	1.02
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.96	.94	.92	.91	.90	.89
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.88	.86	.85	.83	.79	.77	.76	.75
200,000	300,000	500,000	1,000,000	2,000,000	3,000,000		
.73	.72	.70	.69	.68	.62		

FOR EACH FOOT OF VARIATION IN HEIGHT ADJUST ABOVE COST FACTORS BY 3%
FOLLOW SAME RULES AS IC P9 FOR METAL CLAD EXTERIOR.



SPECIAL PURPOSE INDUSTRIAL BASEMENTS

The following cost factors are relating to reinforced concrete and heavy steel-framed basement areas used in conjunction with SPECIAL PURPOSE INDUSTRIAL BUILDINGS NOS. 1 and 2.

BASIC HEIGHT 10'

AREA SHAPE	5,000	8,000	10,000	12,000	18,000	20,000
A	8.90	8.40	8.15	8.00	7.70	7.60
B	9.25	8.75	8.50	8.30	8.00	7.90
C	9.60	9.05	8.80	8.65	8.30	8.20

AREA SHAPE	30,000	50,000	60,000	80,000	100,000	150,000
A	7.40	7.15	7.05	7.00	6.90	6.80
B	7.70	7.45	7.35	7.30	7.20	7.05
C	8.00	7.70	7.60	7.55	7.45	7.35

HEIGHT ADJUSTMENT: 3% for each foot of variation in height.

EXCLUSIONS: Cost factors do not include heating, ventilation, partitions, sprinklers or finished plumbing units.



MEZZANINES

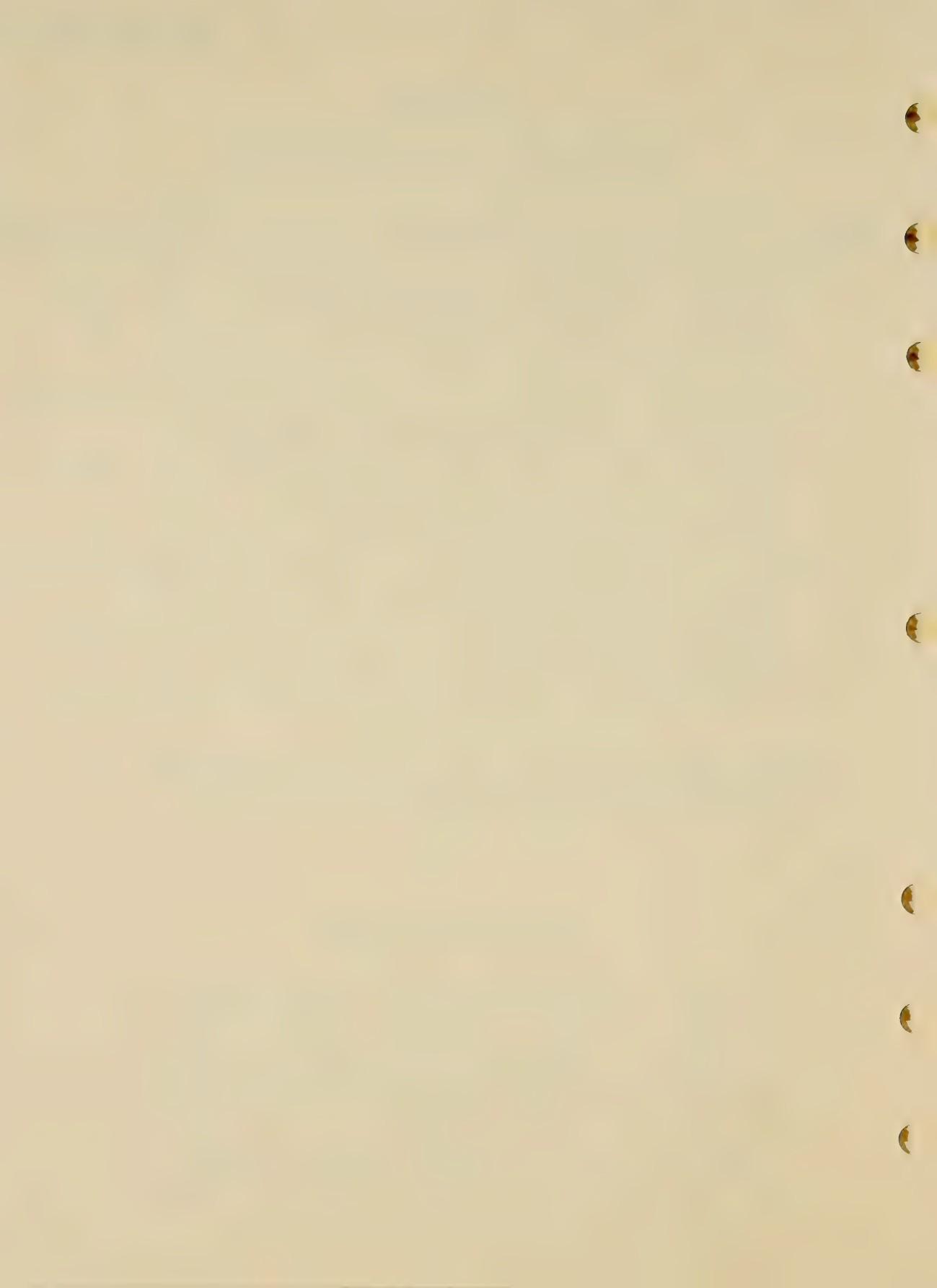
SPECIAL PURPOSE INDUSTRIAL STRUCTURES

TYPE	DESCRIPTION	SQ. FT. COSTS
A	Steel, column and beam structural supports with 8" reinforced concrete elevated slab. Steel pipe handrail and access stairs.	6.00
B	Reinforced concrete column and beam structural supports with 8" reinforced concrete elevated slab. Steel pipe handrail and access stairs.	5.00
C	Steel, column and beam structural supports with steel grating deck. Steel pipe handrail and access stairs.	6.75

LIGHTING Add a lighting cost of 50¢ to basic rate (after adjustment) when applicable.

AREA ADJUSTMENT TABLE

1,000	2,000	3,000	5,000	7,000
1.35	1.20	1.15	1.10	1.05
10,000	12,000	15,000	20,000	30,000
1.00	.98	.96	.94	.92
40,000	60,000	80,000	100,000	150,000
.90	.88	.86	.84	.83



MISCELLANEOUS INDUSTRIAL STRUCTURES

COST FACTORS

BASE 300 SQ. FT. - HEIGHT 10'-0"

TYPE	DESCRIPTION	COST PER. SQ. FT.
(1)	Reinf. conc. foundations, 4" R/Conc. floor slab. corrugated G.I. or asbestos siding and roofing on light steel frame. Kal. door. Steel sash window. Adequate lighting and heating.	\$ 19.75
(2)	Reinf. conc. foundation, 5" R/Conc. floor slab. 8" conc. block walls. Metal roof deck on O.W.S.J. Built-up roofing on bearing walls. Kal. doors. Steel sash window. Adequate lighting, and heating.	\$ 20.10
(3)	Reinf. conc. foundation, 5" conc. floor slab. 8" Reinf. conc. walls. 4" Reinf. conc. Roof deck. Built-up roofing. Some steel frame. Kal. doors. Steel sash window. Adequate lighting, and heating.	\$ 27.00
(4)	Reinf. conc. foundation, 5" conc. floor slab. 4" brick 4" conc. block back-up. Metal roof deck on O.W.S.J. Built-up roofing on bearing walls. Kal. doors. Steel sash window. Adequate lighting, and heating.	\$ 27.25

AREA ADJUSTMENT TABLE

100	150	200	250	300	350	400	450	500
1.55	1.32	1.18	1.08	1.00	.94	.89	.85	.82
550	600	650	700	750	800			
.79	.76	.73	.71	.69	.68			

HEIGHT ADJUSTMENT: 3% for each foot of variation in wall height.

NOTE: Cost Factors do not include basements, air conditioning, sprinklers or interior finishes.



MARINAS

GENERAL COMMENTS

While marina slip dimensions vary to accommodate different size and weight of craft an increase in area does not significantly alter the unit cost. This is because even though the framing is heavier, to carry the increased load, its value is spread over a larger area and consequently the unit cost is about the same as that of a smaller slip.

There are varying types of frame design, but as the function remains identical the same rate will apply.

For costing gasoline pumps and underground storage tanks use Section 2C for rates. Pump out tanks are not to be costed.

For winter storage some marinas provide an "on-land" stacking facility. This is in effect a warehouse with "pigeon-hole" type slots thus allowing boats to be stored in a stacking manner.

For depreciation use normal percent good table, Section 10C, Page 4. Average Life 25 yrs.

BOATING MARINAS AND STORAGE

ITEM	TYPE 1	TYPE 2
TYPE OF BOAT DOCKED	Run abouts - small power boats & other light craft.	Day Cruiser - power boat used in large lakes. Day Sailer - small sailing craft.
SIZE OF SLIP	Length 16' to 25' Width 6' to 11' Height = 11'	Length 25' to 35' Width 10' to 14' Height = 14'
FOUNDATIONS	Cedar Piles, Stone Cribs or Equivalent.	Cedar Piles, Stone Cribs or Equivalent.
FRAMING	4" x 8" wales secured to piles, 6" x 6" columns with horizontal cross bracing. 6" x 8" stringers mounted on columns to carry roof, or equivalent.	4" x 10" wales secured to piles, 6" x 8" columns with horizontal cross bracing. 8" x 8" stringers mounted on columns to carry roof, or equivalent.
ROOFING	Typical rafter roof frame with necessary purlins for sheet steel covering, or equivalent.	
EXT. CLADDING	Metal Siding on wood girts or wood siding, enclosing end walls and half of back wall. Front always open.	
CAT WALKS	2" x 6" Battens secured to wales with some additional bracing. Walks along front and one side of slip	
DREDGING	Necessary depth for boat access	
RETAINING WALL	2" x 6" cedar driven vertically 2' below lake bed with 2" x 6" horizontal stringers and polyethylene lining, or equivalent.	
GOST PER SQ. FT.	\$3.65	\$3.40

HEIGHT ADJUSTMENT: For types 1,2& 3 = 2% for each foot of wall height variation.

SPECIFICATIONS AND COSTS

TYPE 3	TYPE 4 = On Land Storage Boat House	TYPE 5 = On Land Storage Boat House (Open Front)
Cabin Cruiser, House Boats & Large Sailing Boats	All types of water craft	All types of water craft
Length Width 35' to 50' 14' to 18' Height = 18'	See Page M6	See Page M6
Cedar Piles, Stone Cribs, or Equivalent	Concrete pads supporting wood poles or equivalent, conc. slab in centre aisle only (30' to 40' wide)	Concrete pads supporting wood poles or equivalent, conc.
4" X 12" wales secured to piles, 8" X 8" columns with horizontal cross bracing. 8" X 10" stringers mounted on columns to carry roof, or equivalent.	Pole type frame construction with intermediate columns to support roof structure and upper storage levels	Pole type frame construction with intermediate columns to support roof structure and upper storage levels.
Typical rafter roof frame with necessary purlins for sheet steel covering, or equivalent.	Typical rafter roof frame with necessary purlins for sheet steel covering, or equivalent with translucent skylights.	Typical rafter roof frame with necessary purlins for sheet steel covering, or equivalent.
Metal siding on wood girts or wood siding. Enclosing ends walls and half of back wall. Front always open.	3 - 2" X 8" pressure treated sills, 2" x 6" girts, steel siding or equivalent, with one large sliding door. Two man doors.	3 - 2" X 8" pressure treated sills, 2" X 6" girts, steel siding or equivalent.
2" X 6" Battens secured to wales with some additional bracing. Walks along front and one side of slip.	N/A	N/A
Necessary depth for boat access	N/A	N/A
2" X 6" cedar driven vertically 2' below lake bed with 2" X 6" horizontal stringers and polyethylene lining, or equivalent.	N/A	N/A
\$3.45	For costs see page M-6	Deduct \$0.25 per sq. ft. from type 4 rates shown on page M-6

MARINAS

END WALL ADJUSTMENT RATESECTION 9C PAGE M6
BASE YEAR 1969

Types 1-3 Marinas

- 5 - Bay Slip = Add .10¢ per Sq. Ft.
 10 - Bay Slip = Add .05¢ per Sq. Ft.
 15 - Bay Slip = Base Rate as shown.
 30 - Bay Slip = Deduct .05¢ per Sq. Ft.

COST FACTORS
Base Ht. 20'

Type 4 Land Storage

AREA	5,000	10,000	15,000	20,000	25,000
COST	2.30	2.25	2.15	2.10	2.05

Height Adjustment: 3% for each foot of wall Height Variation

OPEN SLIPS

DESCRIPTION & COST

DESCRIPTION	COST PER LIN. FT.
Usually a 4'0" wide main catwalk, parallel to the bank, with 3'0" wide offsets providing side access to the boats. There are two boats docked in each bay with a pile in the centre of the bay entrance to which the sterns are secured. The walks are standard batten type on stringer framing having lateral bracing being secured to cedar piles. The rate includes dredging in the tie-up area and a retaining wall at the bank.	\$2.50

ADDITIVES

ITEM	DESCRIPTION	COST PER SQ. FT.
ELECTRICAL	Minimal lighting - one overhead light per Bay	.05¢
	Overhead light with plug-in receptacle	.10¢
	Heavy duty conduit wiring for serving moored craft	.40¢
WATER SUPPLY	Single cold water line with tap	.05¢
DREDGING	Access Channel	.22¢

P A R K I N G G A R A G E S

GENERAL COMMENTS

The following square foot cost factors have been calculated for multi-storey parking garage structures. Included in the rates are normal parapet walls, minimum electrical wiring, curbs, and all necessary ramps, etc. For those structures of reinforced concrete, structural steel framing with reinforced concrete slabs and/or pre-cast, pre-stressed or post tensioned structures, apply the following rates.

PARKING GARAGES - COST FACTORS

	<u>COST PER SQ. FT.</u>
1st Level above grade	\$ 3.25
2nd Level above grade	3.90
3rd Level above grade	4.20
4th Level above grade	4.40
5th Level above grade	4.55
6th Level above grade	4.70

NOTE: The above cost factors should be applied against the superstructure slabs only. Grade level is normally valued separately with the site.

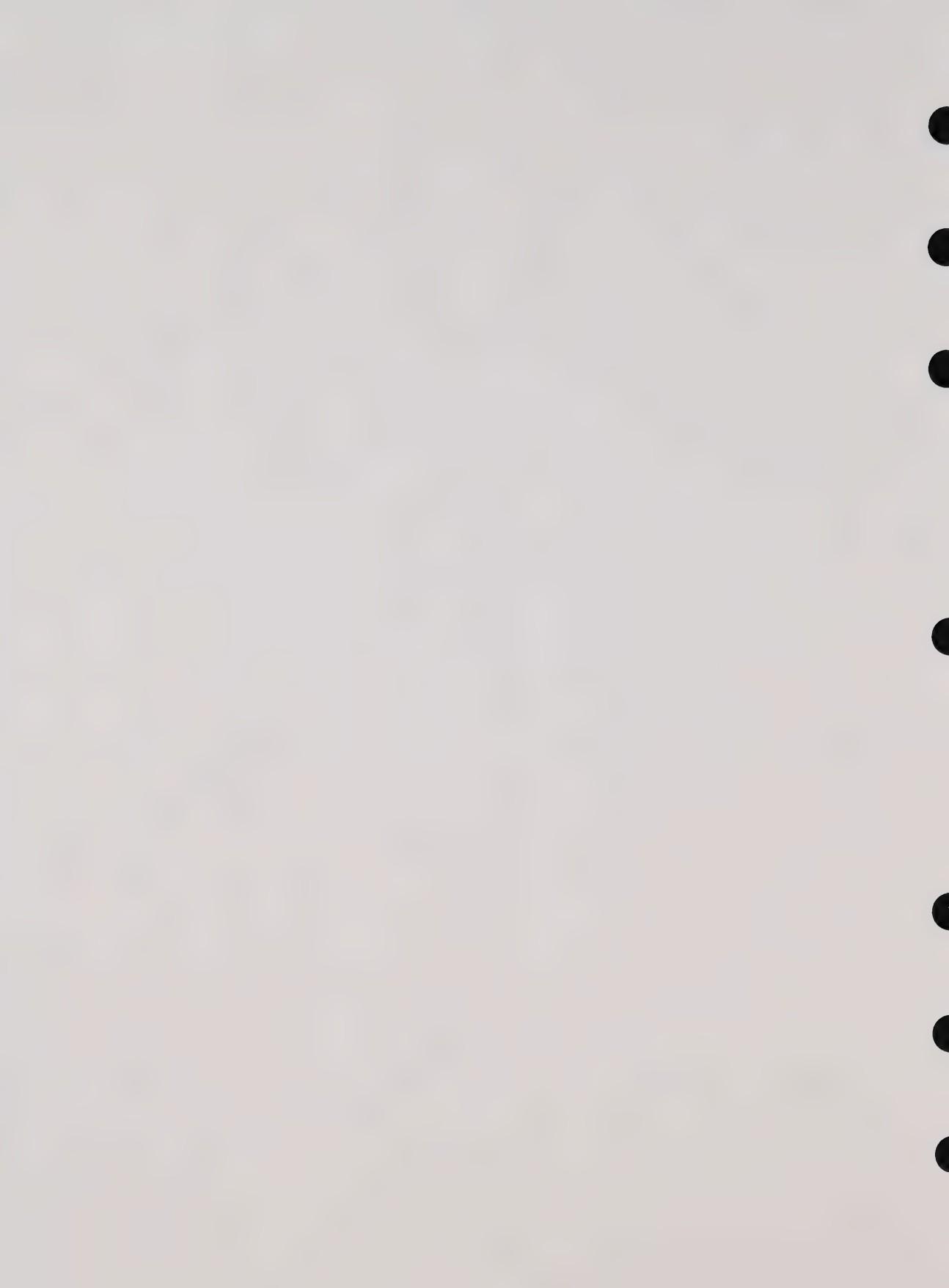


PHOTO KIOSKS

Photo finishing kiosks are prefabricated units usually constructed of metal and glass but may also have a veneer of masonry or other material and are placed on a concrete slab. Built in features such as heating, air-conditioning and photo filing cabinets are included in the base costs.

There are two main types presently on the market:

- (A) Fotomat with its pagoda type roof (generally 37 Sq. Ft.)
- (B) Snap Shot (Generally 54 Sq. Ft.)

BASE RATES FOR EXTERNAL KIOSKS

37 Sq. Ft. = \$4,350

54 Sq. Ft. = \$5,550

BASE RATES FOR INTERNAL KIOSKS

37 Sq. Ft. = \$3,100

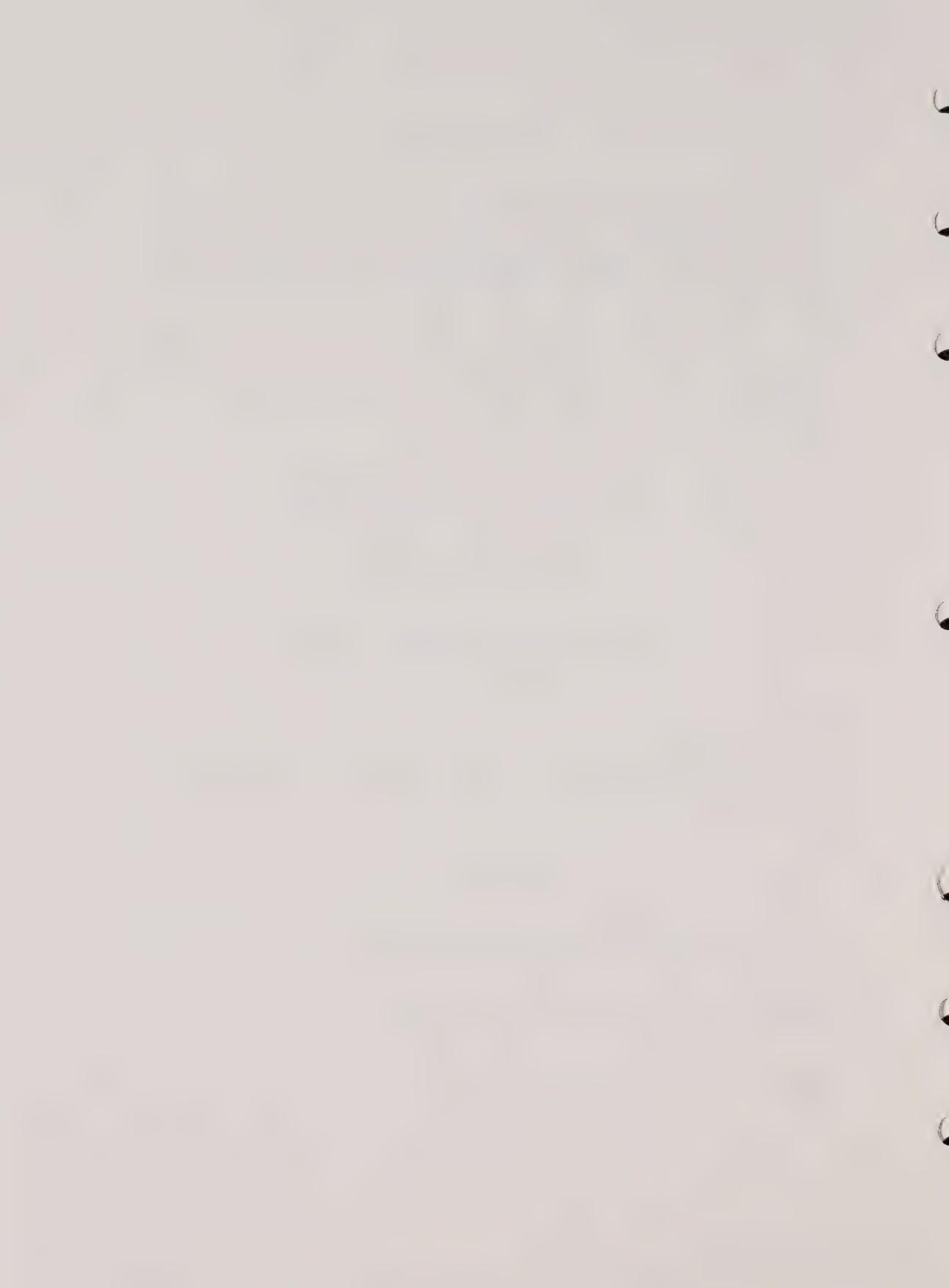
54 Sq. Ft. = \$4,250

Internal kiosks are those kiosks under the roof of another building (i.e. shopping malls). The rates exclude the following:

- i) Concrete Slab
- ii) Electrical Hook-up

Counter top photo finishing installations without walls and roof use a flat rate of \$2,000.

DEPRECIATION - Use 20 year life tables.



REFRIGERATED WAREHOUSES AND STORAGE

GENERAL COMMENTS

To estimate the total cost of a refrigerated warehouse or storage first determine the cost of the basic building. To this add the cost of the refrigeration equipment, insulation and cold storage doors.

To obtain the cost of the refrigeration equipment use the table of cost factors for refrigeration equipment, and the tonnage adjustment table.

$$\boxed{\text{Total cost of Refrigerated Warehouse}} = \boxed{\text{Cost of basic Building}} + \boxed{\text{Refrigeration Equip.}} + \boxed{\text{Insulation}} + \boxed{\text{Doors}}$$

REFRIGERATED WAREHOUSES AND STORAGE

COST FACTORS FOR REFRIGERATION EQUIPMENT

Holding Temperature in °F	-40°	-30°	-20°	-10°	-5°	0°	10°	20°	30°	40°	50°	60°
Rate per ton in \$	1250	1090	940	805	750	695	575	470	380	290	250	220

TONNAGE ADJUSTMENT TABLE

Under 10 Tons	15 Tons	40 Tons	80 Tons	160 Tons	200 Tons	250 Tons and Over
2.00	1.35	1.20	1.05	1.00	0.85	0.65

EXAMPLE

A refrigerated warehouse has a holding temperature of -15°F and a refrigerating capacity of 60 tons. The cost of the refrigeration equipment will be

$$\begin{aligned} \text{Cost} &= \text{Cost factors} \times \text{tonnage adjustment} \times \text{tons} \\ &= \frac{805 + 940}{2} \times \frac{1.20 + 1.05}{2} \times 60 \\ &= 872.5 \times 1.125 \times 60 \\ &= \$58,894 \end{aligned}$$

COLD STORAGE

INSULATION COSTS should be applied to actual square foot areas of insulated walls, floor and ceiling. Prices are for complete installation, including incidental vapour barriers, adhesive, skewers, etc., as appropriate for each type of insulation.

INSULATION - COST FACTORS

MATERIAL APPLIED TO	FLOOR	WALL	SUSP. CEILING
1" Styrene	\$.40	\$.32	\$.87
2" Styrene	.47	.40	.95
4" Styrene	.68	.79	1.34
1" Styrofoam	.48	.41	.96
2" Styrofoam	.65	.57	1.12
4" Styrofoam	1.03	1.14	1.69
1" Foamglas	.56	.48	1.03
2" Foamglas	.80	.73	1.28
4" Foamglas	1.34	1.45	2.00
1" Sprayed on Polyurethane	\$.40 (all areas of application)		
2" Sprayed on Polyurethane	.80 (all areas of application)		
3" Sprayed on Polyurethane	1.10 (all areas of application)		
4" Sprayed on Polyurethane	1.30 (all areas of application)		

Floor cost includes Conc. topping and vapour barrier. Add .50 cents to wall and ceiling costs for mastic or plaster finish.

DOORS

COLD STORAGE DOOR COSTS are applied to the outside square foot surface area of each door. Costs are based on completely installed hinged in fitting and metal-clad doors with hardware and gaskets.

DOOR - COST FACTORS

THICKNESS	C O S T	P E R	S Q.	F T.	O F	D O O R
	Up to 15 sq.ft.	16 - 25 sq.ft.	26-40 sq.ft.	Over 40 sq.ft.		
3"	17.85	15.50	14.85		14.45	
4"	27.00	23.20	18.10		17.50	
6"	28.80	25.05	19.90		19.30	
8"	30.60	26.80	21.80		21.17	

Vestibule Doors ADD 60%

Overlap Type Freezer Doors ADD 15%

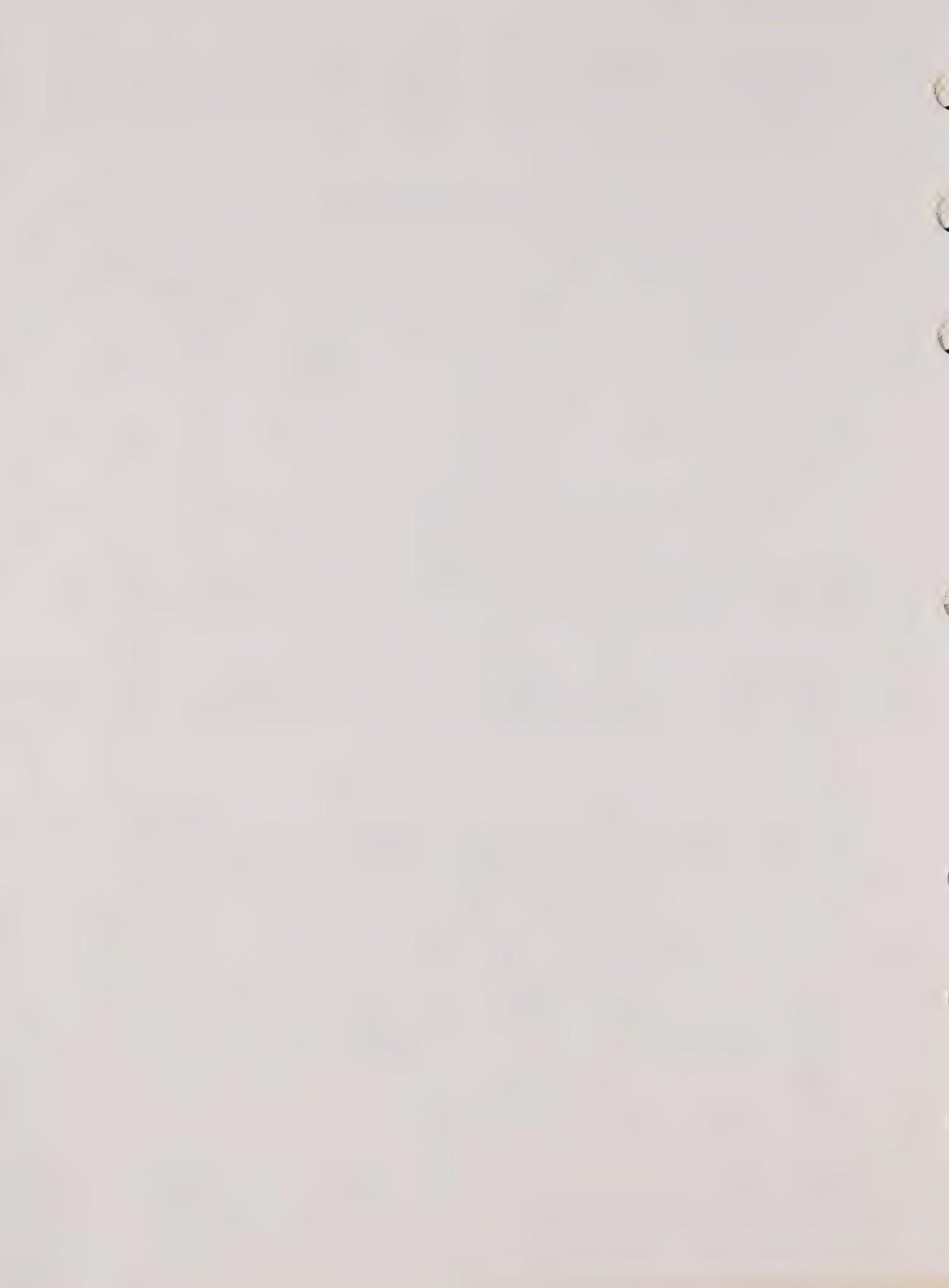
Sliding Doors ADD 20%

Anti-freeze Heating Cable ADD 7.50

Wood Clad Doors DEDUCT 10% per side.per lin. ft. of door perimeter.

DOOR OPERATORS

T Y P E	SINGLE DOORS	DOUBLE DOORS
ELECTRIC OPERATORS	\$1,400 each	\$1,950 each
COMPRESSED AIR OPERATORS	1,500 each	2,050 each



WEIGH SCALES

SPECIFICATION: The following cost factors for scales include the reinforced concrete pit, weighbridge steel full capacity beam for motor truck scales and type registering beam for railroad track scales and scale installation cost. Scale PLATFORM to be added.

NOTE: Weighhouse cost factors are not included.
See listings of additives on next page.

MOTOR TRUCK SCALES

2 SECTION DESIGN			4 SECTION DESIGN		
CAPACITY IN TONS	PLATFORM SIZE IN FT.	COST	CAPACITY IN TONS	PLATFORM SIZE IN FT.	COST
10	18 x 9	\$ 5,300	50	34 x 10	\$ 10,400
15	22 x 9	5,900	50	50 x 10	11,700
15	30 x 10	7,300	50	60 x 10	13,200
20	24 x 10	6,700	50	70 x 10	14,600
20	34 x 10	8,600	60	40 x 10	11,400
25	24 x 10	7,300	60	50 x 10	12,300
25	30 x 10	8,100	60	70 x 10	14,900
30	24 x 10	7,900	70	50 x 10	12,900
30	34 x 10	9,200	70	70 x 10	15,800
40	30 x 10	9,200	75	50 x 10	13,700
40	40 x 10	10,200	75	70 x 10	17,000
50	35 x 10	10,000	80	60 x 10	16,300
50	40 x 10	10,600	80	70 x 10	17,800

WEIGH SCALES

RAILROAD TRACK SCALES

4 SECTION DESIGN			
TOTAL CAPACITY IN TONS	SECTIONAL CAPACITY IN T.	PLATFORM SIZE IN FT.	COST
120	60	50 x 10	\$ 31,200
120	60	60 x 10	35,200
150	75	50 x 10	34,200
150	75	60 x 10	39,200
200	100	50 x 10	40,200
200	100	72 x 10	52,400
200	150	60 x 10	55,200
200	150	76 x 10	66,800
200	200	60 x 10	67,200
200	200	76 x 10	78,800

ADDITIVES:

Type registering beam \$150.00

Cabinet dial with 4 manual weights \$300.00

For electronic print readout use cabinet dial rate

Printomatic weight recorder \$1100.00

Wood Platform \$1.50/S.F.

Concrete Platform \$2.50/S.F.

Steel Platform \$3.00/S.F.

WEIGH SCALES
BUILT IN WAREHOUSE SCALES

SPECIFICATIONS: The cost factor for the following scales include the reinforced concrete pit, weighbridge steel, steel or concrete platform, double beam weighing system for 5 and 10 ton scales and type registering beam for 20 and 30 ton scales and installation cost.

Capacity in Tons	Platform Size	Cost
5	6' x 5'	\$ 2300
5	8 x 6	2600
5	9 x 7	2900
10	8 x 6	3100
10	9 x 7	3400
20	6 x 10	4000
20	8 x 10	4100
30	8 x 10	4700
30	12 x 10	5500

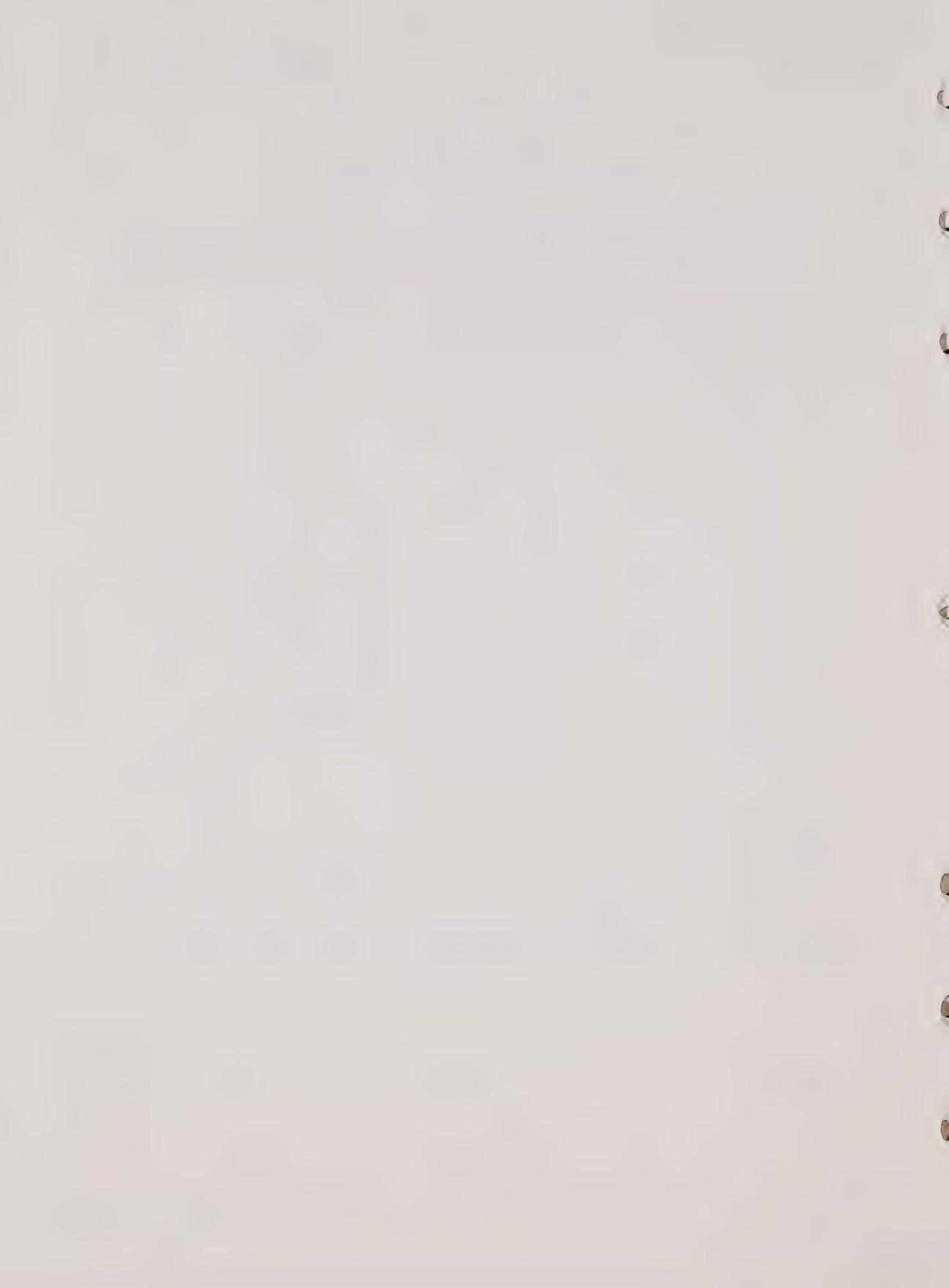
20 and 30 Ton Scales are Axle Load Scales

ADD: \$1000 To Above Cost For Cabinet Dial

DEDUCT: \$1.50/S.F. Of Platform For Wood Deck

ADD OR DEDUCT: \$20.00/S.F. Of Platform Size Deviation Of 5, 10 And 30 Ton Scale

ADD OR DEDUCT: \$5.00/S.F. Of Platform Size Deviation Of 20 Ton Scales

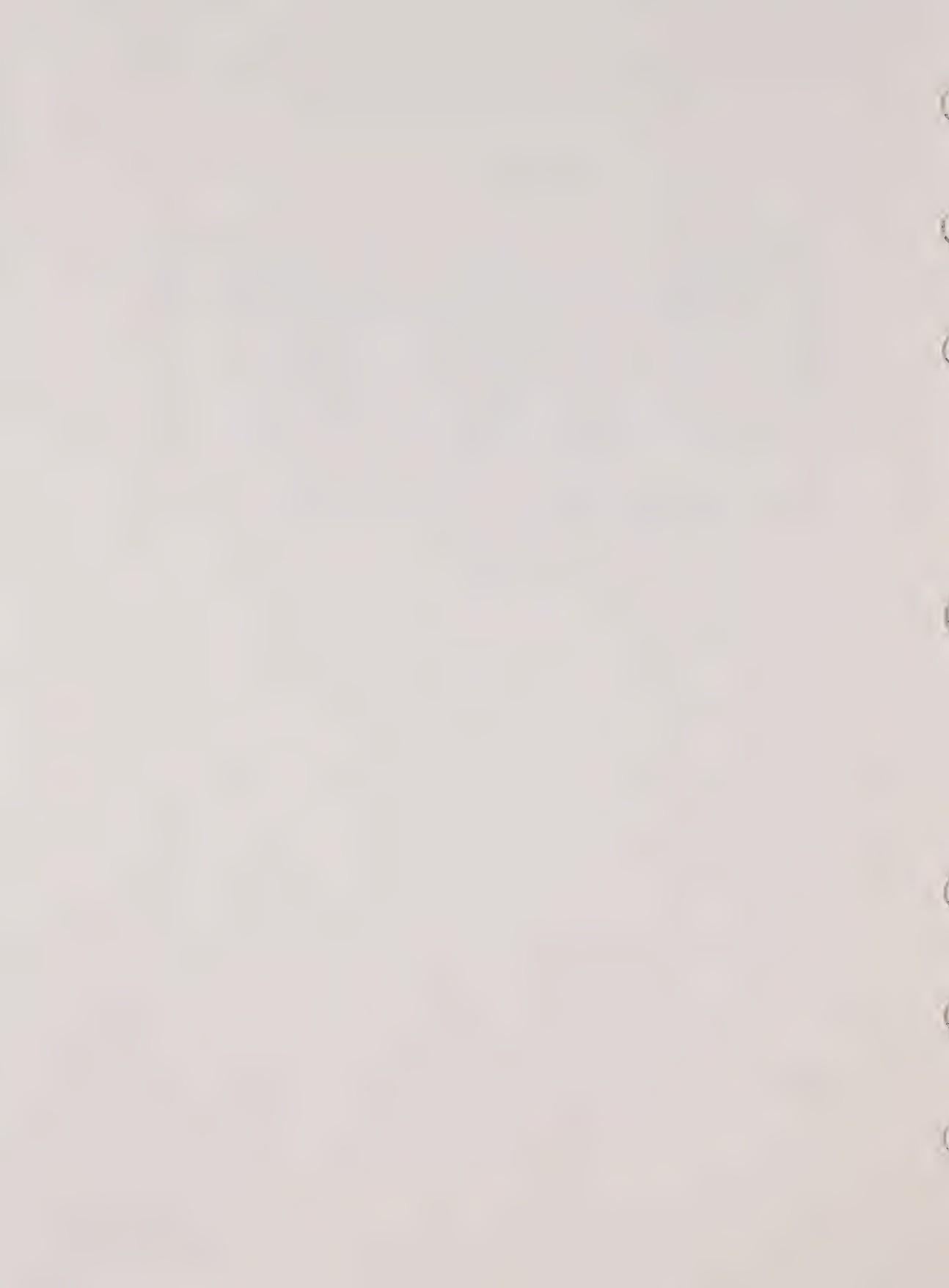


S I D E W A L K S - M O V I N G

COST FACTORS

W I D T H IN INCHES	LENGTH IN FEET	COST PER LIN. FEET
42" - 48"	up to 100'-0"	\$500.- 600.
42" - 48"	up to 300'0"	\$450.- 550.
42" - 48"	up to 500' 0"	\$400.- 500.

NOTE: ANY MOVING SIDEWALK OVER 500' IN LENGTH SHOULD BE COSTED INDIVIDUALLY.



SKI-LIFTS

SPECIFICATIONS The following cost factors include the drive terminal including motor, tension terminal, intermediate towers, cables, tow-hangers with the various types of seat combinations such as poma-stick, T-bar or single, double, triple chairs and the installation cost.

Tow-hangers with the various types of seat combinations are considered as chattels and therefore are deducted from the total lift cost.

NOTE: Deductable seat combinations are listed below the cost tables.

ROPE LIFTS are insignificant in cost and therefore they are not valued.

NOTE: The following data has to be collected:

- 1) Slope length of lift in feet
- 2) Vertical drop of lift in feet
- 3) Cable speed in feet per minute
- 4) Total number of poma-sticks, T-bars, single, double or triple chairs.

COST OF LIFT = Total of units x cost of unit rate.

TOTAL OF UNITS = Length of lift in ft. + vertical drop in ft. + true capacity of person/hour.

FORMULA FOR TRUE CAPACITY OF PERSON/HOUR
SINGLE CHAIR OR POMA-STICK

<u>LENGTH OF LIFT</u>	=	Spacing of S.Chairs or poma-sticks	<u>CABLE SPEED/MIN X60</u>	=	True capacity of persons/ hour
$\frac{1}{2} \#$ of S.Chairs or poma-sticks		Spacing of S.Chair or poma-stick in ft.			

DOUBLE CHAIR OR T-BAR

<u>LENGTH OF LIFT</u>	=	Spacing of D.Chairs or T-bars	<u>CABLE SPEED/MIN X60X2</u>	=	True capacity of persons/ hour
$\frac{1}{2} \#$ of D.Chairs or T-bars		Spacing of D.Chair or T-bar			

Continued

BASE YEAR 1969

FORMULA FOR TRUE CAPACITY OF PERSON/HOUR
TRIPLE CHAIR

$$\frac{\text{LENGTH OF LIFT}}{\frac{1}{2} \# \text{ of T.Chairs}} = \frac{\text{Spacing of T.Chairs}}{\text{CABLE SPEED/MIN X } 60 \times 3} = \frac{\text{True Capacity}}{\text{Spacing of T.Chair}}$$

EXAMPLE FOR DOUBLE CHAIR

$$\frac{1600 \text{ ft}}{\frac{50 \text{ Chairs}}{2}} = 64' \quad \frac{425' \times 60 \times 2}{64'} = \underline{\underline{800 \text{ Persons/Hour}}}$$

T-BAR AND POMA LIFT

Unit Range	\$ Cost Per One Unit
800 to 1490	15.50 to 13.00
1500 to 1690	13.00 to 12.50
1700 to 1890	12.50 to 10.50
1900 to 2190	10.50 to 12.00
2200 to 2690	12.00 to 12.50
2700 to 3290	12.50 to 13.00
3300 to 3790	13.00 to 11.90
3800 to 5000	11.90 to 11.25

DEDUCT \$100.00 for every T-bar hanger or poma-stick.

Continued

BASE YEAR 1969

SINGLE CHAIR LIFT

Unit Range	\$ Cost Per One Unit
1500 to 3490	23.00 to 21.50
3500 to 7000	21.50 to 23.00

DEDUCT \$140.00 for every single chair.

DOUBLE CHAIR LIFT

Unit Range	\$ Cost Per One Unit
1500 to 3490	28.50 to 27.00
3500 to 7000	27.00 to 28.50

DEDUCT \$200.00 for every double chair.

TRIPLE CHAIR LIFT

Unit Range	\$ Cost Per One Unit
1500 to 3490	35.50 to 34.00
3500 to 7000	34.00 to 35.50

DEDUCT \$300.00 for every triple chair.

STEAM PLANT AND EQUIPMENT

GENERAL COMMENTS

This section relates to those generating stations where steam is generated at a central source. The steam is then distributed through pipes to apartment buildings, shops, hospitals, industrial buildings, schools etc. both for heating and processing purposes.

Cost factors have been developed for the following:

- 1) Machinery and equipment in the boiler house.
- 2) Pipelines forming the distribution network.
- 3) Adjustment factors for heating buildings from outside source.

a) Boiler House Machinery and Equipment

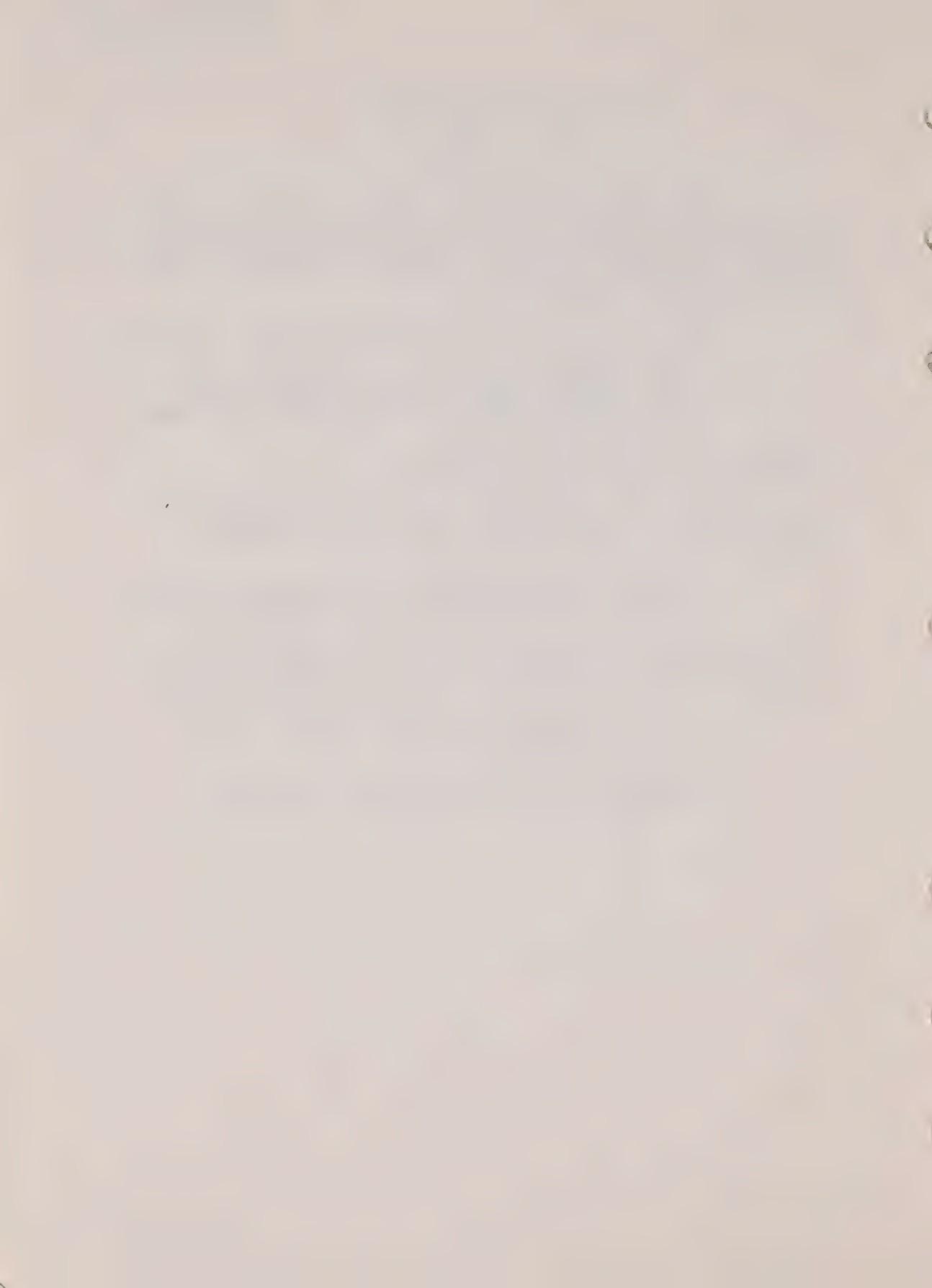
Our boiler rates are based on POUNDS OF STEAM PER HOUR. Boilers are sometimes rated in the following manner.

1. Boiler horsepower, commercial or nominal rating*
2. British thermal units per hour (BTU per hour)

If either of these two units are used to rate the capacity of the boiler, the following conversion factors should be applied to express them in pounds of steam per hour.

1. H.P. of boiler (commercial rating) x 34.5 =
pounds of steam per hour
2. $\frac{\text{BTU per hour}}{970.3}$ = Pounds of steam per hour

* Do not use nominal rating



STEAM PLANT AND EQUIPMENT

The cost factors for boilers include all ancillary equipment such as pumps, compressors, pipes, valves, meters etc. All boilers should be assessed including the standbys. Auxiliary equipment such as preheaters and economisers are to be treated as additives. When there are a number of boilers in a plant each should be costed separately. When costing preheaters and economisers however, the cost factors for these additives should be applied to the total amount of steam generated in the plant. (See example below).

COST FACTORS FOR STEAM BOILERS

Capacity in pounds of steam/hr.	Rate per pound of steam/hr.
Up to 50,000	\$2.35
100,000 and over	\$1.85

Interpolate for capacities between 50,001 and 99,999 pounds of steam per hour.

COST FACTORS FOR ADDITIVES TO BOILERS

	Up to 50,000 pounds of steam per hour	100,000 pounds of steam per hour and over
Economisers	\$0.40	\$0.25
Preheaters	\$0.40	\$0.25

Interpolate for capacities between 50,001 and 99,999 pounds of steam per hour.

Depreciation and Obsolescence

Depreciate all boilers and additives by a flat 50% of the R.C.N.

Example 1

A steam generating plant has the following boilers:

2174 H.P. (commercial rating)
1449 H.P. "
725 H.P. (4 boilers) "

(continued)

STEAM PLANT AND EQUIPMENT (CONTINUED)

cont'd) It has the usual amount of ancillary equipment and is also provided with preheaters. The assessed value of the boiler house equipment and machinery will be:

2174 H.P. = $2174 \times 34.5 = 75,000$	pounds steam/hr.	
RCN = $75,000 \times 2.10$		= 157,500
1449 H.P. = $1449 \times 34.5 = 50,000$	pounds steam/hr.	
RCN = $50,000 \times 2.35$		= 117,500
725 H.P. = $725 \times 34.5 = 25,000$	pounds steam/hr.	
RCN = $4 \times 25,000 \times 2.35$		= <u>235,000</u>
	Total	= 510,000

$$\begin{aligned} \text{Total steam generated} &= 225,000 \text{ lbs/hr} \\ \text{RCN of preheaters} &= 0.25 \times 225,000 \\ &= \$56,250 \end{aligned}$$

$$\begin{aligned} \text{Total RCN} &= 510,000 + 56,250 = \$566,250 \\ \text{Depreciate by 50\%} \\ \text{Assessed value} &= \$283,125 \end{aligned}$$

STEAM PIPELINES

The rates for pipelines include excavation, laying and jointing, all valves and fittings, cathodic protection if any, protective coatings and casings.

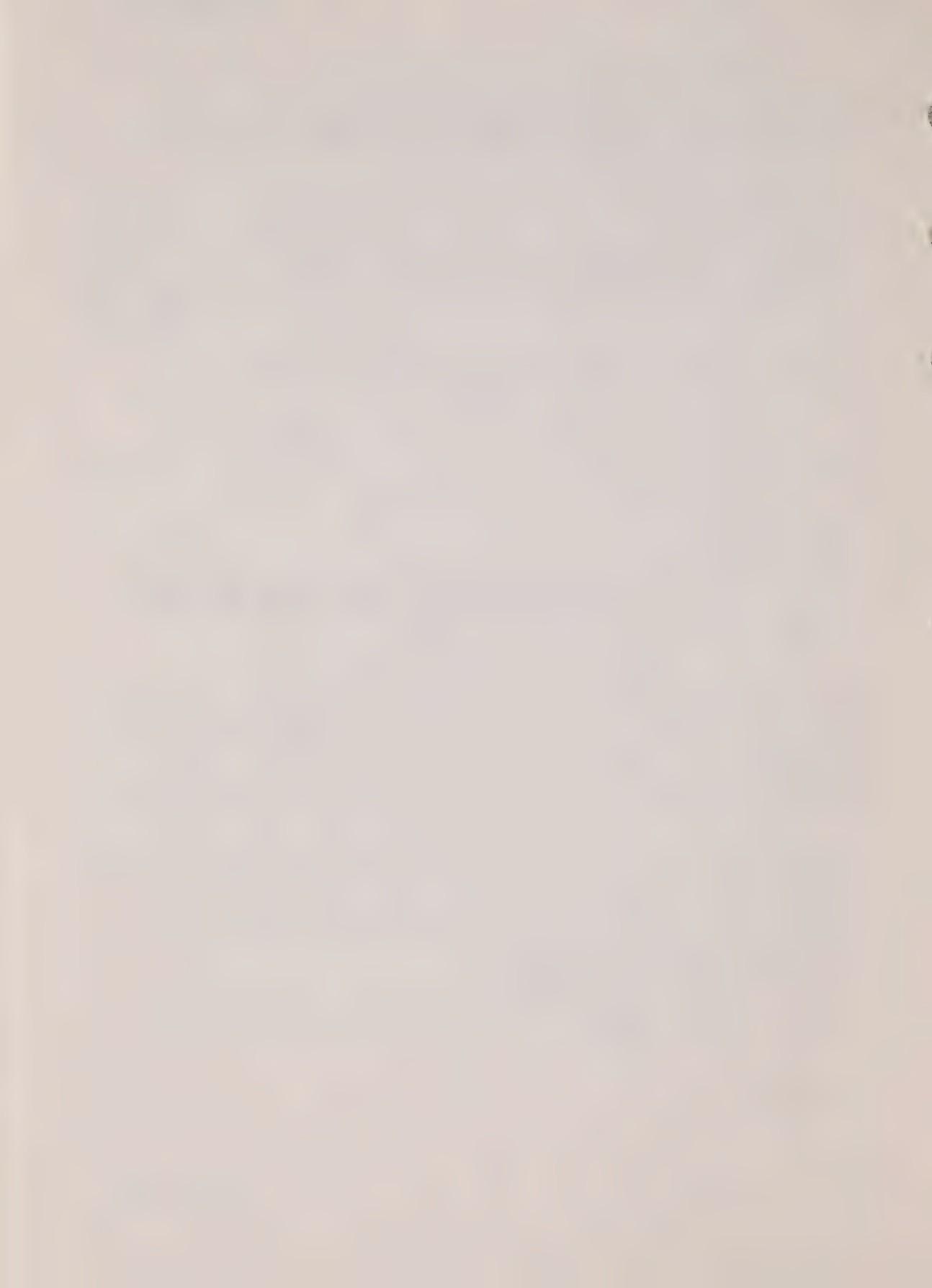
COST FACTORS FOR STEAM PIPES

Diameter	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Rate per lineal ft.	1.90	2.15	2.35	2.60	3.10	3.85	4.85	6.15

Diameter	5"	6"	8"	10"	12"	14"	16"
Rate per lineal ft.	8.45	10.10	12.80	16.45	20.90	23.20	30.15

DEPRECIATION AND OBSOLESCENCE

Depreciate the RCN by a flat 50% irrespective of the age of the pipeline.



ADJUSTMENT FACTORS FOR BUILDINGS HEATED
FROM OUTSIDE SOURCE

For all buildings whether apartments, shops, offices, industrial buildings etc. heated by steam from a central steam generating plant APPLY the following factors to the appropriate heating rates in the Valuation Manual.

Gross Area in Sq. Ft.	Factor to be applied to relevant hot water heating rate in Manual
Up to 10,000	0.60
10,001 to 50,000	0.70
50,001 to 100,000	0.80
Over 100,000	0.85

Example 1

An apartment building of 200,000 sq. ft. 15 storeys high is heated by steam from an outside source. The cost of heating the building will be:

Rate for apartment hot water heating SECTION 4 PAGE 10
 $= 0.55/\text{S.F.}$

$$\begin{aligned} \text{Cost of heating the bldg.} &= \text{Area} \times \text{Rate} \times \text{Factor } (\text{from above table}) \\ &= 200,000 \times 0.55 \times 0.85 \\ &= \$93,500 \end{aligned}$$

Example 2

A medical/dental building of 10,000 sq.ft. is heated by steam from an outside source. The cost of heating the building will be:

Rate for hot water heating (good) SECTION 8C PAGE 16 =
 $1.35/\text{S.F.}$

$$\begin{aligned} \text{Cost of heating the building} &= \text{Area} \times \text{Rate} \times \text{Factor } (\text{from above table}) \\ &= 10,000 \times 1.35 \times 0.60 \\ &= \$8,100 \end{aligned}$$

TANKS AND RESERVOIRS

Cost Factors for Steel Storage Tanks are classified according to Marketing and Manufacturing uses. Marketing costs include Federal and Provincial Sales Taxes; Manufacturing costs include Provincial Sales Tax only.

Capacities where given in gallons refer to smaller tanks normally 'shop' fabricated; where given in barrels the larger tanks are normally 'field' erected.

Factors are based on costs incurred under normal circumstances when approximately six tanks are ordered and erected at any given time.

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SECTION 9C PAGE T-2 TANKS & RESERVOIRS

BASE YEAR 1969

CAPACITY OF TANKS OR RESERVOIRS

(Per Foot of Depth or Height)

Diameter in Feet	Imperial Gallons	Barrels	Diameter in Feet	Imperial Gallons	Barrels
1'0"	4.89	.14	27'0"	3,566.49	101.99
1'6"	11.01	.31	28'0"	3,835.56	109.68
2'0"	19.57	.56	29'0"	4,114.42	117.66
2'6"	30.58	.87	30'0"	4,400.07	125.82
3'0"	44.03	1.26	31'0"	4,701.50	134.44
3'6"	59.93	1.71	32'0"	5,009.72	143.26
4'0"	78.28	2.24	33'0"	5,327.71	152.35
4'6"	99.07	2.83	34'0"	5,655.55	161.73
5'0"	122.31	3.50	35'0"	5,993.07	171.38
5'6"	147.99	4.23	36'0"	6,340.42	181.31
6'0"	176.12	5.04	37'0"	6,697.56	191.52
6'6"	206.70	5.91	38'0"	7,064.48	202.02
7'0"	239.72	6.86	39'0"	7,441.19	212.78
7'6"	273.19	7.87	40'0"	7,827.68	223.84
8'0"	313.11	8.95	41'0"	8,223.96	235.17
8'6"	353.47	10.11	42'0"	8,630.02	246.78
9'0"	396.28	11.33	43'0"	9,045.86	258.67
9'6"	441.53	12.63	44'0"	9,471.49	270.85
10'0"	489.23	13.99	45'0"	9,906.90	283.30
11'0"	594.97	16.93	46'0"	10,352.11	296.03
12'0"	704.49	20.15	47'0"	10,807.09	309.04
13'0"	826.80	23.64	48'0"	11,271.86	322.33
14'0"	958.89	27.45	49'0"	11,746.41	335.90
15'0"	1,100.78	31.48	50'0"	12,230.75	349.75
16'0"	1,252.43	35.81	60'0"	17,612.28	503.64
17'0"	1,411.87	40.37	70'0"	23,972.27	685.51
18'0"	1,585.11	45.33	80'0"	31,310.72	895.36
19'0"	1,766.12	50.50	90'0"	39,627.63	1,133.19
20'0"	1,956.92	55.96	100'0"	48,923.00	1,399.00
21'0"	2,157.50	61.70	120'0"	70,449.12	2,014.56
22'0"	2,367.87	67.71	140'0"	95,889.08	2,742.04
23'0"	2,588.03	74.01	160'0"	125,242.88	3,581.45
24'0"	2,817.96	80.58	180'0"	158,510.52	4,532.77
25'0"	3,057.69	87.44	200'0"	195,692.00	5,596.01
26'0"	3,307.19	94.57	220'0"	236,787.32	6,771.17

$$\text{Capacity in Gallons} = D^2 \times 4.8923 \times \text{Height} \quad (\text{diameter and height in feet})$$

1 Barrel = 34.97 Imperial Gallons

NORMAL PERCENT GOOD TABLES

Normal percent good tables shown under Section 10C pages 4 and 5 should be used in connection with the following tanks:

Corrugated Steel	20 yrs	Steel Oil Storage (cut off at 30 yrs or 38% Good)	30 yrs
Wood	20 yrs	Concrete/Steel water storage (surface)	35 yrs
Underground Steel Steel Pressure	25 yrs 25 yrs	Elevated Steel	35 yrs

T A N K S

OIL STORAGE TANKS -- WELDED STEEL

COST FACTORS

CAPACITY IN GALLONS	MARKETING TYPE	MANUFACTURING TYPE	CAPACITY IN GALLONS	MARKETING TYPE	MANUFACTURING TYPE
2,000	\$ 650	\$ 580	12,000	\$ 2,160	\$ 1,940
3,000	850	760	15,000	2,470	2,200
4,000	900	820	20,000	3,470	3,120
5,000	1,120	1,000	25,000	3,900	3,500
10,000	1,670	1,500			

PROPANE PRESSURE TANKS -- WELDED HORIZONTAL

COST FACTORS

CAPACITY IN GALLONS	MARKETING TYPE	MANUFACTURING TYPE	CAPACITY IN GALLONS	MARKETING TYPE	MANUFACTURING TYPE
1,000	\$ 1,100	\$ 980	20,000	\$ 12,250	\$ 11,000
3,000	3,200	2,900	25,000	14,300	12,850
5,000	5,250	4,800	40,000	19,700	17,750
6,000	6,200	5,520	50,000	23,000	20,700
10,000	7,600	6,800	80,000	31,700	28,500
15,000	10,000	9,060	100,000	36,900	33,200

NOTE:

The above COST FACTORS for Oil and Propane Tanks are based on 'shop' fabricated tanks including painting, delivery and erection with all necessary foundations, manholes and fittings.

TANKS

MARKETING AND MANUFACTURING

OIL STORAGE TANKS - WELDED STEEL

COST FACTORS

CAPACITY (barrels)	SIZE diam x ht (ft)	MARKETING		MANUFACTURING	
		type	(\$)	type	(\$)
1,000	21 x 16		6,000		5,500
2,000	30 x 16		10,000		9,000
3,000	30 x 24		11,100		10,000
5,000	38 x 24		13,200		11,900
10,000	55 x 24		20,500		18,600
15,000	55 x 36		27,700		25,100
20,000	60 x 40		34,200		32,100
30,000	80 x 34		44,200		41,500
33,000	80 x 36		47,500		44,600
50,000	90 x 44		68,000		63,500
55,000	90 x 48		73,200		68,700
75,000	120 x 36		92,200		86,200
80,000	120 x 39		96,600		90,700
90,000	120 x 45		106,500		100,000
95,000	120 x 48		111,000		104,500
100,000	140 x 37		115,600		108,500
120,000	140 x 44		136,400		128,000
130,000	140 x 48		145,800		136,900
150,000	180 x 33		165,500		155,400
180,000	170 x 45		193,600		181,800
200,000	200 x 36		211,500		198,500

ADD: \$120.00 to \$180.00 per foot of diameter for pontoon floating roof.
\$200.00 to \$300.00 per foot of diameter for double deck floating roof.

NOTE: Costs are for tanks erected on gravel bed with steel ring curb and include foundations, cone roofs with supports, outside ladders, manholes, openings, vents, catwalks, stairways, platforms and painting.

RESERVOIRS

Costs are average costs including sand and gravel foundations and steel retaining rings for 1,000,000 gallon capacity and under. Over 1,000,000 gallons, costs include concrete perimeter tank footings. Average tank appurtenances such as ladders, painting, fittings on tanks, etc., are included.

SURFACE RESERVOIRS -- WELDED STEEL
COST FACTORS

CAPACITY IN GALLONS	COST	CAPACITY IN GALLONS	COST
10,000	\$ 6,200	500,000	\$ 42,000
20,000	7,900	750,000	55,000
50,000	11,800	1,000,000	70,000
75,000	14,500	1,500,000	102,000
100,000	16,000	2,000,000	130,000
150,000	20,000	3,000,000	165,000
200,000	24,000	5,000,000	253,000
300,000	30,000	7,500,000	284,000

SURFACE RESERVOIRS -- REINFORCED CONCRETE
COST FACTORS

CAPACITY IN GALLONS	COST	CAPACITY IN GALLONS	COST
20,000	\$ 6,500	1,000,000	\$ 40,000
50,000	7,500	1,500,000	53,500
75,000	10,000	2,000,000	68,000
100,000	11,000	5,000,000	111,000
200,000	18,000	7,500,000	142,000
500,000	30,000	10,000,000	172,000

Costs are average including fnds., and normal tank appurtenances.

NOTE: For 10" - 12" Re. conc. flat roof ADD \$3.50 - \$3.60 P.S.F.
of surface area

For re. conc. dome roof ADD \$4.00 P.S.F. of actual area.
Dividing walls should be added for by using appropriate
rates found in the in-place cost section.

TANKS
INDUSTRIAL

Costs are average for tanks erected on sand or gravel with steel ring curb and included foundation costs, cone roofs with supports as needed, outside ladder, roof and shell manholes, threaded and/or flanged openings as needed for operation, roof vent and paint. Catwalks, stairways and platforms are NOT included.

OIL STORAGE TANKS -- WELDED STEEL

COST FACTORS

CAPACITY IN BARRELS	DIAMETER IN FEET	HEIGHT IN FEET	COST	CAPACITY IN BARRELS	DIAMETER IN FEET	HEIGHT IN FEET	COST
500	15	16	\$ 4,500	30,000	80	34	\$ 55,600
1,000	21	16	7,600	50,000	90	44	86,000
2,000	30	16	10,100	75,000	120	36	108,700
3,000	30	24	11,900	100,000	140	37	135,600
5,000	38	24	13,600	150,000	180	33	200,000
10,000	55	24	23,700	200,000	200	36	248,000
15,000	55	36	36,300	250,000	220	37	311,600
20,000	60	40	43,500	300,000	240	37	369,000

STAINLESS STEEL TANKS -- WELDED

COST FACTORS

CAPACITY IN GALLONS	INDUSTRIAL TANKS	MARKETING TANKS	CAPACITY IN GALLONS	INDUSTRIAL TANKS	MARKETING TANKS
1,000	\$ 1,490	\$ 1,750	8,000	\$ 4,500	\$ 5,200
2,000	1,950	2,250	10,000	5,200	6,000
3,000	2,450	2,800	12,000	5,900	6,800
4,000	2,990	3,450	15,000	7,150	8,250
5,000	3,500	4,050	20,000	9,550	11,000
6,000	3,750	4,300	25,000	12,000	13,800

COST FACTORS are based on shop fabricated tanks and include all necessary foundations, manholes and installation costs.

T A N K S

WELDED STAINLESS STEEL TANKS

COST FACTORS

CAPACITY (galls)	MARKETING TYPE (\$)	MANUFACTURING TYPE (\$)	CAPACITY (galls)	MARKETING TYPE (\$)	MANUFACTURING TYPE (\$)
1,000	1,750	1,490	8,000	5,200	4,500
2,000	2,250	1,950	10,000	6,000	5,200
3,000	2,800	2,450	12,000	6,800	5,900
4,000	3,450	2,990	15,000	8,250	7,150
5,000	4,050	3,500	20,000	11,000	9,550
6,000	4,300	3,750	25,000	13,800	12,000

NOTE: Cost Factors are based on 'shop' fabricated tanks including delivery and erection with all necessary foundations, manholes and fittings.

SECTION OF PAGE T 6

TANKS

INTERIOR TANK LININGS

COST FACTORS

CAPACITY IN BARREL	COST OF LINING PER BARREL					
	EPOXY	ZINC	ALUM	FIBREGLASS	ST/STEEL	PLASTIC PVC.
250	2.65	2.00	2.75	6.60	13.20	6.60
500	2.20	1.65	2.30	5.55	11.00	5.55
1,000	1.75	1.30	1.85	4.40	8.75	4.40
2,000	1.45	1.10	1.55	3.65	7.30	3.65
3,000	1.25	.90	1.30	3.05	6.10	3.05
5,000	1.05	.75	1.10	2.55	5.10	2.55
10,000	.90	.65	.95	2.20	4.45	2.20
15,000	.75	.55	.75	1.83	3.65	1.85
20,000	.65	.50	.70	1.65	3.30	1.65
30,000	.60	.45	.65	1.55	3.10	1.55
50,000	.50	.40	.53	1.26	2.50	1.26
75,000	.50	.36	.51	1.21	2.40	1.21
100,000	.45	.35	.49	1.18	2.35	1.18
150,000	.46	.35	.48	1.16	2.30	1.16
200,000	.43	.32	.45	1.07	2.15	1.07
250,000	.41	.30	.43	1.02	2.03	1.02
300,000	.39	.29	.41	.99	1.97	.99

NOTE: The above Cost Factors are average, Costs per barrel for Tank linings includes sandblasting and all normal preparation.

TANKS
ELEVATED

The following costs are based on multi column ellipsoidal elevated water tanks and include the supply and installation of tank, tower, riserpipe, foundations and paint. Pumps and pump-houses are not included.

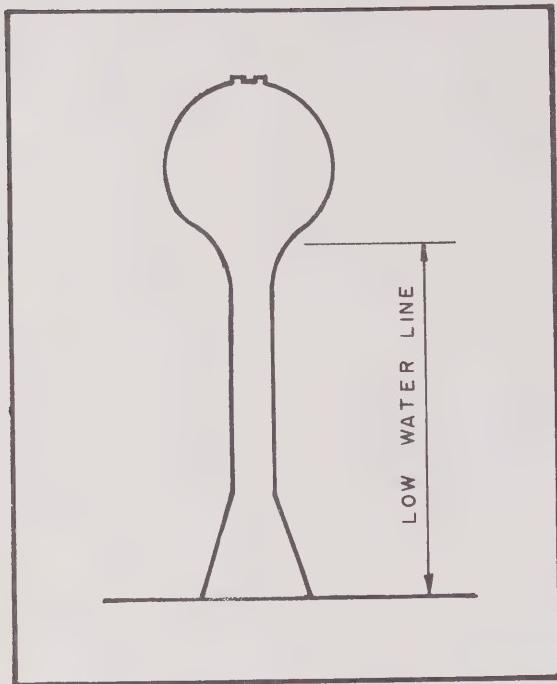
ELEVATED STEEL TANKS
COST FACTORS

CAPACITY (IMP. GALS)	HT. TO LOW WATER LINE	COST	CAPACITY (IMP. GALS)	HT. TO LOW WATER LINE	COST
25,000	50'0"	\$ 48,000	200,000	50'0"	\$112,000
	75'0"	53,500		75'0"	120,000
	100'0"	59,500		100'0"	134,500
	150'0"	72,000		150'0"	159,000
50,000	50'0"	57,000	300,000	50'0"	138,500
	75'0"	60,500		75'0"	148,500
	100'0"	69,000		100'0"	165,500
	150'0"	83,000		150'0"	193,000
75,000	50'0"	65,000	500,000	50'0"	181,000
	75'0"	69,500		75'0"	194,500
	100'0"	80,500		100'0"	215,000
	150'0"	95,000		150'0"	251,500
100,000	50'0"	73,000	1,000,000	50'0"	315,500
	75'0"	78,000		75'0"	346,000
	100'0"	90,000		100'0"	379,000
	150'0"	106,000		150'0"	456,000
150,000	50'0"	93,000	1,500,000	50'0"	437,500
	75'0"	99,000		75'0"	491,000
	100'0"	111,500		100'0"	549,000
	150'0"	133,000		150'0"	657,500

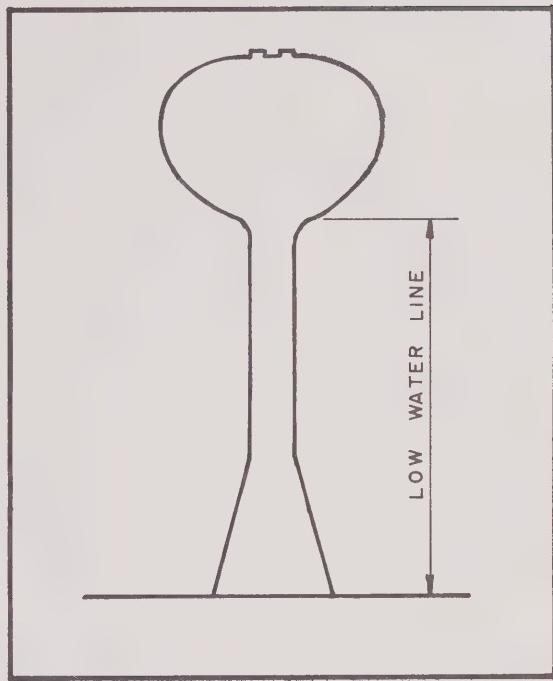
ADD 10% to cost for single or multi column watersphere or waterspheroid design.

TANKS

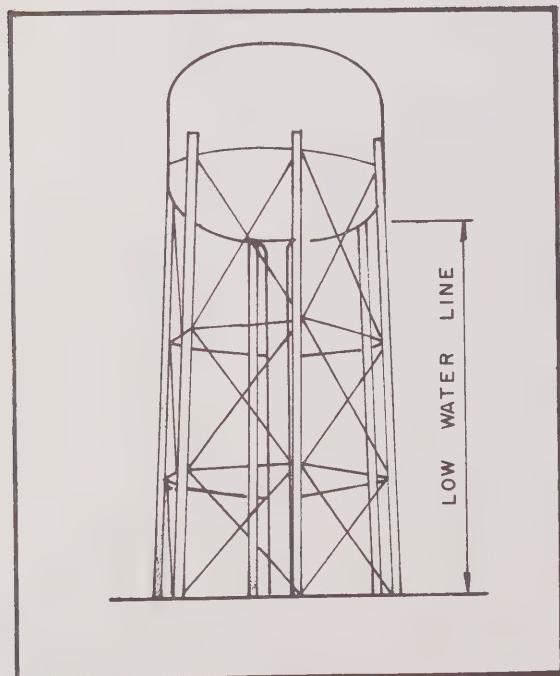
ELEVATED STEEL TANKS - EXAMPLES



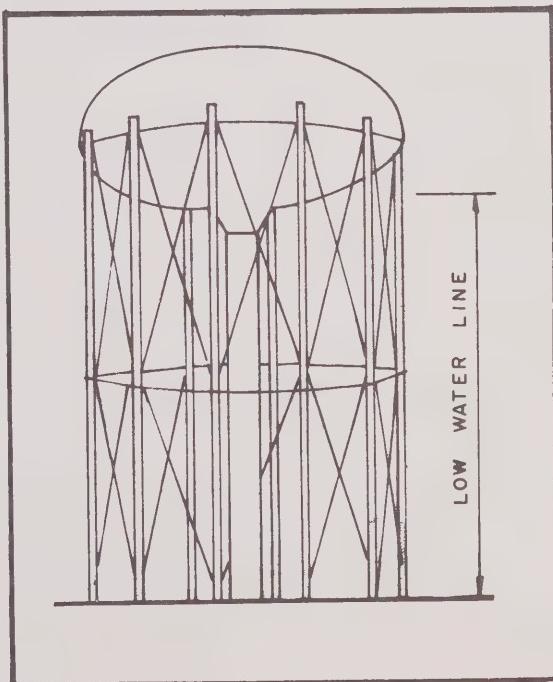
WATERSPHERE TANK



WATERSPHEROID TANK



MULTI COLUMN
ELLIPSOIDAL TANK



MULTI COLUMN
WATERSPHEROID TANK

SECTION OF PAGE TWO
SECTION OF PAGE TWO

TRUCK TERMINALS

GENERAL COMMENTS

Specifications follow for two types of Truck Terminal structures, namely loadbearing and structural steel. In estimating the costs of these structures, attention has to be focused on the fact, that, generally these buildings have a clear span, therefore, there is a distinct lack of interior steel columns. However, there is always the exception to the rule and the possibility of finding one or two rows of interior columns is great in buildings of a large area. The main identity of the Truck Terminal is usually a long and narrow building which will fall into a B or C shape category and has an abundance of overhead doors spaced every 10'-16' apart.

The cost factors that follow have taken into consideration a 4' above grade allowance which is normal to this type of building. Special telescopic weather guard canopy facilities, are not included and should not be taken as part of the structure.

The specifications and cost factors included in this Section are based on information developed from a base year 1969.

Additive cost factors for Truck Terminals can be ascertained by utilizing the additives in Section 1C, page 15-28 inclusive.

S P E C I F I C A T I O N S F O R T R U C K
L O A D

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS:	8" masonry or conc. walls 4' above grade and below frost line with adequate footings.	10" masonry or conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.	10-12" masonry or re. conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.
FLOOR STRUCTURE:	4" conc. slab.	4" reinfo ced conc. slab on gravel fill.	5% reinforced conc. slab on sand or gravel fill.
WALL STRUCTURE:	8" conc. block exterior and partition bearing wall.	10" conc. block with face brick on front, 10" conc. block partition bearing wall or equiv.	10-12" masonry with face brick on front and sides, 10" conc. block partition bearing wall or equiv.
ROOF STRUCTURE:	Laminated beams or wood trusses; wood decking hot mopped.	Open web steel joists light ga. metal decking, 4 ply built-up roofing.	Open web steel joists, medium ga. metal decking, 1" rigid ins. 4 ply built-up roofing.
DOORS:	Metal sliding or swinging doors 10'-16' spacing. Wood pedestrian doors.	Wood sectional O.H. loading doors 10'-16' spacing. Wood or metal pedestrian doors.	Wood or metal sectional O.H. doors with heavy hardware 10'-16' spacing. Metal pedestrian doors.
WINDOWS:	Minimum of stationary metal sash with single glazing.	Minimum of standard industrial metal sash with single glazing.	Minimum of standard industrial metal sash with opening sections and single glazing.
ELECTRICAL	BX cable wiring, minimum incandescent fixtures.	BX cable wiring, adequate incandescent or fluorescent fixtures.	BX cable or conduit wiring, average number of fluorescent fixtures.
PLUMBING:	Minimum plumbing.	Adequate washroom facilities.	Standard washroom facilities & drains.

TERMINAL BUILDINGS
BEARING

CONST. CLASS 'C'

C - 7	C - 8	C - 9	C - 10
12-16" masonry or re. conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.	12-16" masonry or re. conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.	12-16" masonry or re. conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.	16" masonry or re. conc. walls 4' above grade and below frost line; footings as req'd by Nat. Bldg. Code.
5" reinforced conc. slab, machine finish. sand or gravel fill.	6" re. conc. slab machine finish with metallic hardener. sand or gravel	6-7" re. conc. slab, machine finish with metallic surface hardener. sand or gravel fill.	7-8" re.conc. slab, machine finish with metallic surface hardener, sand or gravel fill.
10-12" masonry with complete face brick exterior; 10" conc. block partition bearing wall or equiv.	12-16" masonry with complete face brick exterior or equiv. 12" conc. block partition bearing wall or equiv.	12-16" masonry with select quality face brick, precast conc. panel or equiv. 12" masonry partition bearing wall or equiv.	12-16" re. masonry with select precast conc. panels or equiv. 12-16" masonry partition bearing wall or equiv.
Open web steel joists medium gauge metal decking, 1-2" rigid insul. 4 ply built-up roofing.	Long span steel joists heavy gauge decking, 1½-3" rigid insul. 5 ply built-up roofing.	Steel beams or trusses, heavy ga. metal decking, 2" + rigid insul. 5 ply built-up roofing.	Precast conc. or heavy duty steel beams with 2" + rigid insul. 5 ply built-up roofing.
Metal O.H. roll doors chain operated or equiv. 10'-16' spacing. Metal pedestrian doors.	Metal O.H. roll doors electrically operated or equiv 10'-16' spacing. Metal pedestrian doors.	Metal-Glass O.H. roll doors 10'-16' spacing, electrically operated or equiv. Fire resistant metal pedestrian doors.	Metal-Glass O.H. roll doors 10'-16' spacing, electrically operated or equiv. Fire resistant and metal pedestrian doors.
Minimum of good grade industrial metal sash with opening section and single glazing.	Minimum of select grade metal sash with vented single glazed windows, chain power operated.	Minimum of select grade metal sash with adjustable single glazed windows, electrically operated.	Minimum of select grade metal sash with adjustable single glazed windows, electrically operated.
BX cable or conduit wiring, select quality fluorescent fixtures or equiv.	BX cable and conduit wiring, select quality fluorescent fixtures, or equiv.	Heavy duty BX cable and conduit wiring select quality mercury fixtures or equiv.	Heavy duty BX cable and conduit wiring, select quality mercury fixtures or equiv.
Good quality washroom facilities and drains.	Good quality washroom facilities and drains.	Select washroom facilities and drains.	Select washroom facilities and drains.

S P E C I F I C A T I O N S F O R T R U C K
S T E E L

CLASS COMPONENTS	C - 4	C - 5	C - 6
FOUNDATION AND FOOTINGS:	Adequate reinforced conc. footings as req'd for structural steel, 8" masonry or conc. foundation walls. 4' above grade.	Adequate re. conc. footings as req'd for structural steel 8" masonry or conc. foundation walls. 4' above grade.	Std. re. conc. footings as req'd for structural steel, 10" masonry or re. conc. foundation walls. 4' above grade.
FLOOR STRUCTURE:	4" concrete slab on grade.	4" reinforced conc. slab on grade.	5" re. conc. slab, gravel fill.
STEEL STRUCTURE:	Light weight steel columns & beams with open web steel joists.	Light weight steel columns & beams with open web steel joists.	Average weight steel columns & beams with open web steel joists.
EXTERIOR WALLS:	8" concrete block or equiv. in metal siding.	8" concrete block with face brick on front of building, or heavy duty metal siding.	10" masonry with face brick on front & sides; heavy duty insulated metal siding or equiv.
ROOF STRUCTURES:	Light gauge metal decking with 3 ply built-up roofing or equiv.	Light gauge metal decking with 4 ply built-up roofing or equiv.	Medium gauge metal decking with 1" rigid insulation & 4 ply built-up roofing.
DOORS:	Wood sliding doors, 10'-16' spacing and wood pedestrian doors	Wood sectional O.H. doors, 10'-16' spacing, wood or metal pedestrian doors.	Wood sectional O.H. doors with heavy hardware, 10'-16' spacing chain operated or equiv. Metal pedestrian doors.
WINDOWS:	Minimum of light weight stationary industrial metal sash with single glazing.	Minimum of standard stationary industrial metal sash with single glazing.	Minimum of standard industrial metal sash with manual opening section and single glazing.
ELECTRICAL:	Minimum wiring and incandescent fixtures.	BX cable wiring with adequate incandescent or open fluorescent fixtures.	BX cable or conduit wiring with select quality fluorescent fixtures or equiv.
PLUMBING:	Minimum plumbing requirements.	Minimum washroom facilities, nec. drains.	Adequate washroom facilities & drains.

TERMINAL BUILDINGS
FRAMING

CONST. CLASS 'C'

C - 7	C - 8	C - 9	C - 10
Std. re. conc. footings as req'd for structural steel, 10-12" masonry or re.conc. foundation walls. 4' above grade.	Heavy re. conc. footings as req'd for structural steel, 12" masonry or re. conc. foundation walls. 4' above grade.	Heavy re.conc. footings as req'd for structural steel,12" masonry or re.conc. foundation walls. 4' above grade.	Heavy re. conc. footings as req'd for structural steel, 12-16" masonry or re.conc. foundation walls. 4' above grade.
5" re. conc. slab, machine trowelled, sand or gravel fill.	6" re. conc. slab with surface hardener, sand or gravel fill.	6-7" re. conc. slab, with metallic surface hardener, sand or gravel fill.	7-8" heavily re. conc. slab with metallic surface hardener, sand or gravel fill.
Average weight steel columns & beams with long span steel joists.	Steel columns & beams with long span steel joists.	Steel columns & beams with long span steel joists.	Steel columns & beams with long span steel joists or steel truss.
10" masonry with complete face brick exterior; heavy duty insulated metal siding or equiv.	10-12" masonry with complete select face brick exterior; light precast conc. panels or equiv.	Architectural design 12" masonry with select glazed brick; precast concrete panels or equiv.	Architectural design heavy precast conc. panels with punched in windows or equiv.
Medium gauge metal decking with 1-2" rigid insul. and 4 ply built-up roofing.	Heavy gauge metal decking with 1½-3# rigid insul. and 5 ply built-up roofing.	Heavy gauge metal decking with 2" or more rigid insul. 5 ply built-up roofing.	Heavy gauge metal decking with 2" or more rigid insul. 5 ply built-up roofing.
Metal O.H. doors chain operated or equiv. 10'-16' spacing, fire resistant metal pedestrian doors.	Metal roll O.H. doors, electrically operated or equiv. 10'-16' spacing, Fire resistant metal pedestrian doors.	Metal-Glass roll O.H. doors, electrically operated or equiv. 10'-16' spacing, fire resistant metal pedestrian doors.	Metal-Glass roll O.H. doors, electrically operated or equiv. 10'-16' spacing, fire resistant pedestrian doors.
Minimum of good grade metal sash with opening section chain operated, single glazing.	Minimum of select grade metal sash with vented single glazed windows, chain operated.	Minimum of select grade metal sash with adjustable single glazed wdw. electrical operated.	Minimum of select grade metal sash with adj. single glazed windows, electrical operated.
BX cable & conduit wiring with select quality fluorescent fixtures or equiv.	Heavy duty BX cable and conduit wiring with select quality fluorescent or mer. fixtures or equiv.	Heavy duty BX cable and conduit wiring with select quality mercury fixtures or equiv.	Heavy duty BK cable and conduit wiring with select quality mercury fixtures or equiv.
Std. washroom facilities & drains.	Std. washroom facilities & drains.	Select washroom facilities & drains.	Select washroom facilities & drains.

TRUCK TERMINALS
COST FACTORS - STEEL FRAME TYPE
(BASE 10,000 SQ. FT.)

CLASS SHAPE \	4	5	6	7	8	9	10
A	6.25	6.90	7.65	8.40	9.70	11.15	11.95
B	6.55	7.25	8.05	8.80	9.55	10.95	12.55
C	6.90	7.60	8.40	9.25	10.00	11.50	13.15
STOREY HT.	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"	20'-0"

AREA ADJUSTMENT TABLE
(BASE 10,000 SQ. FT.)

2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
1.51	1.36	1.27	1.20	1.14	1.10	1.06	1.03
10,000	11,000	13,000	15,000	18,000	20,000	24,000	27,000
1.00	.98	.94	.91	.87	.84	.80	.78
30,000	35,000	40,000	50,000	70,000	90,000	100,000	150,000
.76	.73	.71	.67	.62	.58	.56	.51

COST FACTORS - LOAD BEARING TYPE
(BASE 10,000 SQ. FT.)

CLASS SHAPE \	4	5	6	7	8	9	10
A	5.50	6.20	7.00	7.90	9.05	10.00	11.20
B	5.80	6.50	7.35	8.30	9.50	10.50	11.75
C	6.05	6.80	7.70	8.70	9.95	11.00	12.30
STOREY HT.	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"	20'-0"

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE: The above cost factors include the normal 4 foot above grade allowance proper to truck terminals.

EXCLUSIONS: Cost factors do not include basements, heating, air conditioning, ventilation, sprinklers or interior finishes. Second storey cost factors may be obtained by applying 80% to first storey rates.

METAL CLAD BUILDING: For each foot of variation in height up to $1\frac{1}{2}$ times the basic height shown, adjust the unit costs by 3% per foot; for each additional foot of height adjust by 1% per foot.

CLASSIFICATION: When costing a structure with metal clad exterior reduce rate by one half class.

T U N N E L S

C O S T F A C T O R S

(BASE HEIGHT 8'-0")

COST PER LIN. FT.

TYPE	DESCRIPTION	TUNNEL WIDTHS					
		4'0"	6'0"	8'0"	10'0"	12'0"	16'0"
I	6" Reinforced concrete floor slab 8" Reinforced concrete walls. 6" Reinforced concrete roof slab. Some vaporproof lighting.	\$ 68.	\$ 71.	\$ 79.	\$ 85.	\$ 90.	\$103.
II	6" Reinforced concrete floor slab. 10" Reinforced concrete walls. 8" Reinforced concrete roof slab. Some vaporproof lighting.	78.	84.	91.	98.	104.	119.
III	6" Reinforced concrete floor slab. 12" Reinforced concrete walls. 8" Reinforced concrete roof slab. Some vaporproof lighting.	84.	88.	98.	105.	111.	127.
IV	6" Reinforced concrete floor slab. 16" Reinforced concrete walls. 8" Reinforced concrete roof slab. Some vaporproof lighting.	100.	105.	116.	125.	133.	151.

HEIGHT ADJUSTMENT: For each foot of variation in height adjust the above unit costs by 5%

BASIC HEIGHT OF 8'-0" taken to underside of roof slab.

NOTE: Cost factors do not include heating, air conditioning, sprinklers or interior finishes.

(C)

(C)

(C)

(C)

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(C)

TENNIS COURTS

The pavement of tennis courts generally consist of 4" - 5" base course followed by 2"-3" surface course. The materials used in those courses depend on the type of court being built, i.e. in penetration courts the base course is usually crushed stone and the surface course consist of three layers of different size of limestone; each layer penetrated with asphalt emulsion, followed by trap rock screening finish. While in the case of Laykold Courts, the base course is crushed limestone graded in size and penetrated by asphalt emulsion macadam, and the levelling course consist of stone, sand and limestone dust with laykold binder in pre-determine proportion and mixed in a mechanical mixer.¹ This is following $\frac{1}{2}$ " of laykold surface course prepared in a similar manner to the levelling course with the use of $\frac{1}{2}$ " screeds, a laykold colour coat will be applied to give the final finish.

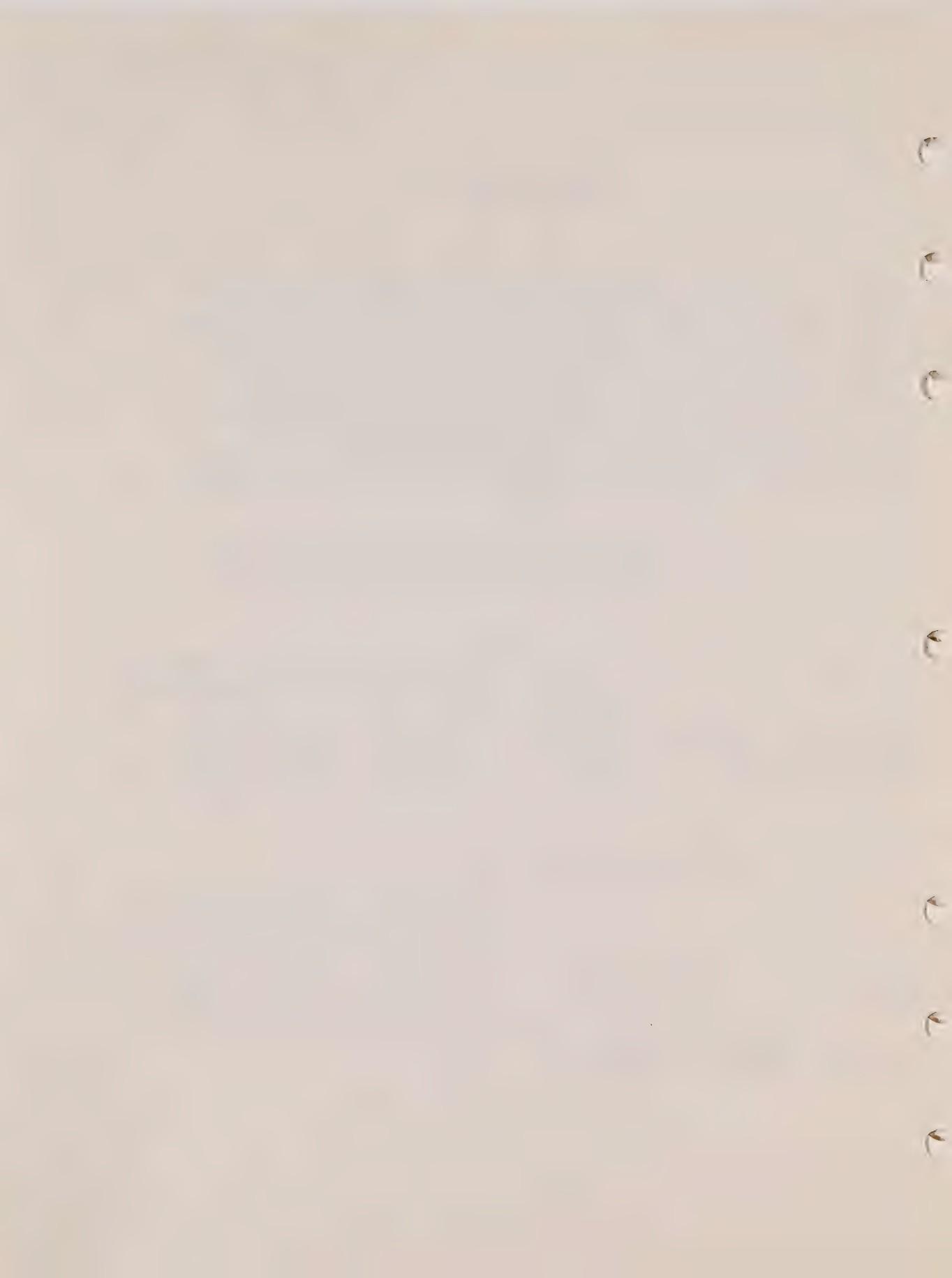
The cost of the tennis courts include normal excavation, and levelling full pavement, marking and curbs. Generally speaking the life of courts vary from 5 to 15 years depending on the type of court.

TYPE OF COURT	COLOUR	1 COURT 120' X 60'	2 COURT 120' X 110'	3 COURT 120' X 165'
Hard Asphalt Type Courts	Black	\$2,745	\$4,805	\$ 6,850
Asphalt Emulsion Penetration	Grey-Green	\$3,490	\$6,110	\$ 8,670
Laykold Type Courts	Standard	\$4,740	\$8,290	\$11,810
Har-tru Type Courts	Green	\$4,740	\$8,290	\$11,810

FULLY ENCLOSED FENCING:
(2" mesh chain links type with necessary gates)

TYPE OF FENCING	1 COURT 120' X 60'	2 COURT 120' X 110'	3 COURT 120' X 165'
Galvanized iron, 10' high - 9 Gauge	\$2,295	\$2,805	\$3,305
Galvanized iron, 10' high - 12 Gauge	\$1,920	\$2,335	\$2,755
Galvanized iron, 12' high - 9 Gauge	\$2,730	\$3,335	\$3,935

Developed By A. M. Al-Hawas
Approved By J. Kumar



TENNIS COURTS

SURFACING MATERIALS: The following materials could be added to any existing court surface.

MATERIALS	COLOUR	1 COURT 120' X 60'	2 COURT 120' X 110'	3 COURT 120' X 165'
Rubber compound laid down in layers and in a liquid form e.g. Dynaturf etc. 1/4" thick 1/8" thick	Standard	\$ 6,290 \$ 3,915	\$11,040 \$ 6,860	\$15,730 \$ 9,780
Rubberized fibrated sand slurry surface course e.g. silkourt etc. 1/8" thick	Standard	\$ 1,870	\$ 3,285	\$ 4,675
Polyvinyl chloride-laid in rolls 3' wide. e.g. uniturf etc. 3/8" thick 1/4" thick 3/16" thick	Standard	\$14,740 \$11,905 \$ 8,785	\$25,860 \$20,890 \$15,415	\$36,850 \$29,765 \$21,970
1/4" carpeting	Standard	\$ 8,660	\$15,195	\$21,650
Colour surfacing using acrylic Compound. e.g. laykold etc.	Standard	\$ 945	\$ 1,655	\$ 2,360

NOTE: For indoors courts apply the same depreciation as the building. For outdoors courts use 50% to 70% good depending on the total condition of the courts--fair, average or good.

LIGHTING:

Incandescent outside lighting including pole, one fixture & bracket	\$255
Mercury vapour outside lighting including pole, one fixture & bracket	\$305
Additional incandescent fixture	\$ 75
Additional mercury vapour fixture	\$135



WHARVES AND JETTIES

BASIC HEIGHT 5' HIGH WATERMARK

TYPE I	Treated Wood Piling Solid or Dbl. Whales 2" - 3" Wood Plank Deck.	<u>Cost Per Sq. Ft.</u>
TYPE II	Heavy Treated Wood Piling Solid Whales Bolted Construction, Heavy Wood Bracing 3" Plank Deck.	\$2.80
TYPE III	Steel H. Section Piling Reinf. Conc. Walls. Heavy Reinf Conc. Slab Deck Stone Fill.	\$3.25
TYPE IV	Steel. H. Section Piling Trough Type Steel Plate Walls Heavy Duty Turn Buckles Bracing Stone and Rubble Fill, Heavy Reinf. Conc. Slab Deck.	\$7.60
		\$9.40

NOTE: Deduct .90¢ P.S.F. From Types III - IV When Deck is Asphalt.

HEIGHT ADJUSTMENT; Types I and II 1% Per Foot
Types III and IV 8% Per Foot

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OVERHEAD WALKWAYS

PRESSURE LOCKED METAL GRATINGS

(GRATINGS INCLUDE STRUCTURAL FRAMING.)

DEPTH OF BEARING BAR	COST PER SQ. FOOT							
	PAINTED STEEL		GALVANIZED STL.		ALUMINUM		STAINLESS STEEL	
	1-500	500-up	1-500	500-up	1-500	500-up	1-500	500-up
1"	5.85	5.60	6.00	5.75	7.10	6.70	26.00	23.50
1½"	7.00	6.65	7.25	6.90	8.75	8.15	34.00	30.50
2"	8.10	7.75	8.50	8.10	10.15	9.45	41.00	37.00

RIVETED METAL GRATINGS

(GRATINGS INCLUDE STRUCTURAL FRAMING)

DEPTH OF BEARING BAR	COST PER SQ. FOOT							
	PAINTED STEEL		GALVANIZED STL.		ALUMINUM		STAINLESS STEEL	
	1-500	500-up	1-500	500-up	1-500	500-up	1-500	500-up
1"	7.50	6.75	7.70	7.00	7.80	7.35	41.50	34.00
1½"	8.60	7.75	8.90	8.05	9.35	8.70	49.00	40.50
2"	9.95	8.95	10.40	9.35	10.85	10.10	57.50	47.50

ADD FOR SERRATED GRATING BAR DEPTH

1" \$ 0.30 / SF

1½" \$ 0.45 / SF

2" \$ 0.60 / SF

SERRATED GRATING

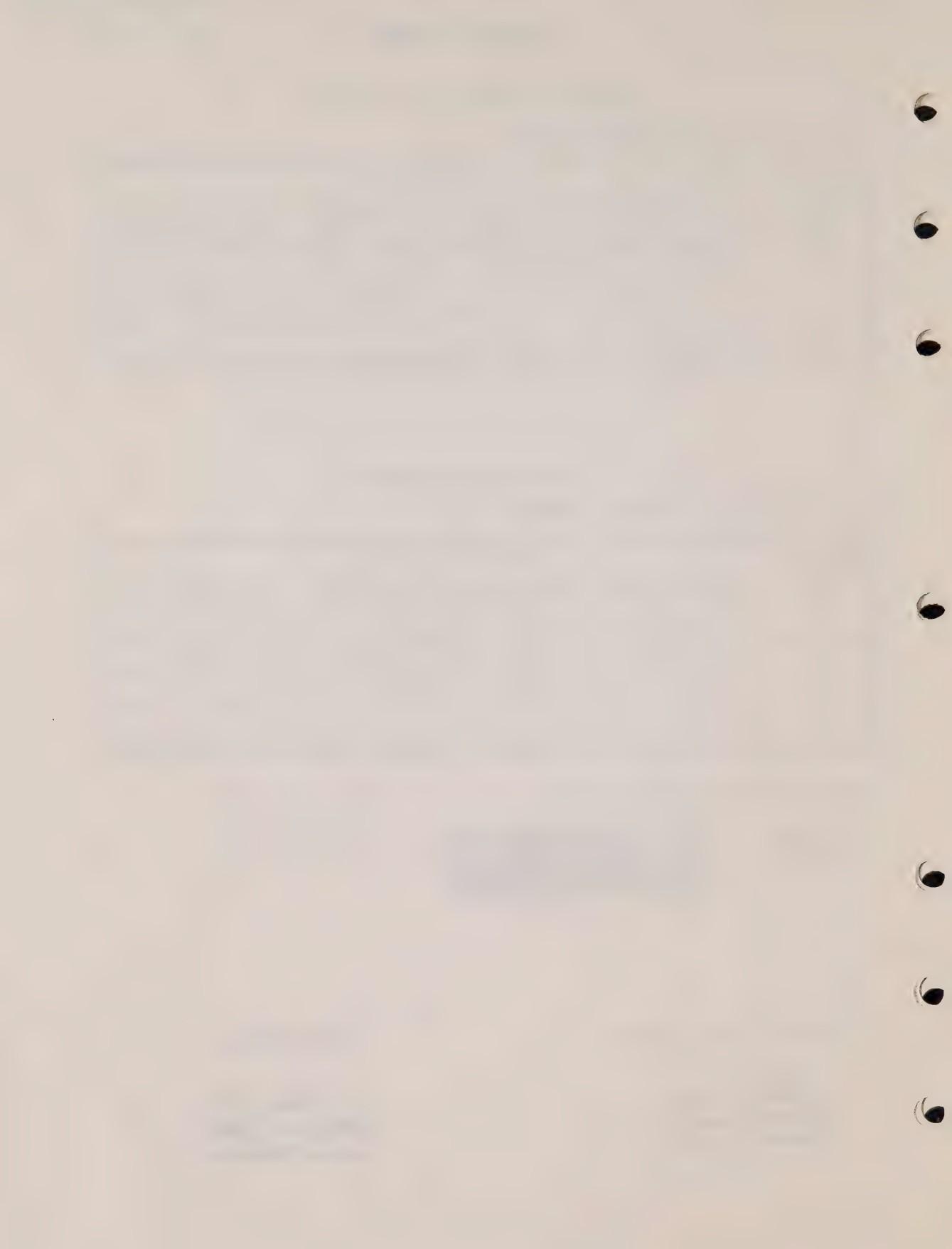


PRESSURE LOCKED GRATING



RIVETED GRATING





OVERHEAD WALKWAYS

PLATFORMS WITH CHECKERED PLATE

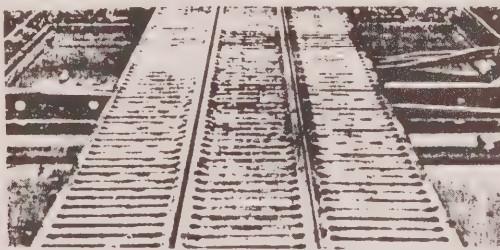
$\frac{1}{4}$ " painted checkered plate platforms including structural framing. \$ 7.20/SF

Add or deduct for each 1/16" deviation in thickness \$ 1.20/SF

PAINTED OR GALVANIZED STEEL ELEVATED FLOOR PLANKS

6" wide floor plank incl. structural steel framing \$ 2.15/LF

9" " " " " " " \$ 3.00/LF



STEEL STAIR 3' - 0" wide 12' - 0" high with steel grating or

checkered plate treads incl. paint or galvanized finish \$ 475.00

Add for Aluminum grating treads \$ 35.00

FOR EVERY 6 INCHES WIDTH VARIATION OF STAIR TREADS

Add or deduct 8%

FOR EVERY 7 $\frac{1}{2}$ INCHES HEIGHT VARIATION

Add or deduct 5%

ADDITIVES

1 $\frac{1}{2}$ " pipe or flat bar railing	\$ 5.00/LF
2" angle railing	\$ 6.50/LF
Aluminum pipe railing	\$ 15.00/LF
Stainless steel pipe railing	\$ 30.00/LF

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AVERAGE LIFE TABLES - NORMAL PERCENT GOOD TABLES

The Appraisal Notes for the Assessor outlines the recommended procedure to be followed in developing tables similar to the ones presented in this Section.

It is to be particularly noted, however, that the Percent Good Tables in this Handbook are simply illustrations of how such tables should appear and do not reflect rates of depreciation in any specific area in Ontario. The Department does not recommend that they be used as actual tables until they have been substantiated from market data.

General Remarks

- 1) Average Life equals Economic Life.
- 2) Average Life assumes normal maintenance of a structure but no functional obsolescence due to poor design.
- 3) Percent Good is the complement of depreciation --- e.g. depreciation of 60% equals a percent good of 40%.
- 4) Normal Percent Good Tables are designed to measure normal functional obsolescence and normal physical depreciation.

AVERAGE LIFE TABLES

(IN YEARS)

TYPE	CONST. TYPE OR RATING	CLASSIFICATION									
		2	3	4	5	6	7	8	9	10	
BANK	A	-	-	60	60	60	60	60	60	60	
	B	-	-	60	60	60	60	60	60	60	
	C	-	-	50	55	60	60	60	60	60	
	D	-	-	25	40	45	50	50	50	50	
GARAGE	A	-	45	50	50	50	50	50	50	50	
	B	-	45	50	50	50	50	50	50	50	
	C			35	40	40	50	50	50	50	
	D	20	20	30	40	45	45	45	45	45	
HOTEL	A			50	50	50	50	50	50	50	
	B			50	50	50	50	50	50	50	
	C	-	-	45	45	50	50	50	50	50	
	D	-	-	30	40	45	45	45	45	45	
MEDICAL	A	45	45	45	50	50	50	50	50	50	
	B	45	45	45	50	50	50	50	50	50	
	C	-	-	45	45	50	50	50	50	50	
	D	-	-	30	40	45	50	50	50	50	
OFFICE	A	-	-	-	60	60	60	60	60	60	
	B	-	-	-	60	60	60	60	60	60	
	C	-	-	50	50	50	50	50	50	50	
	D	-	-	30	40	45	50	50	50	50	
STORE	A	-	50	60	60	60	60	60	60	60	
	B	-	50	60	60	60	60	60	60	60	
	C	-	50	50	50	50	50	50	50	50	
	D	-	30	40	45	50	50	50	50	50	
THEATRE	A	-	-	-	50	50	50	50	50	50	
	B	-	-	-	50	50	50	50	50	50	
	C	-	-	-	45	45	45	45	45	45	
	D	-	-	-	35	40	40	40	40	40	
WAREHOUSE	A	-	-	60	60	60	60	60	60	60	
	B	-	-	60	60	60	60	60	60	60	
	C	-	-	50	50	50	50	50	50	50	
	D	-	-	40	45	50	50	50	50	50	
FACTORY	A	-	-	60	60	60	60	60	60	60	
	B	-	-	60	60	60	60	60	60	60	
	C	-	-	50	50	50	50	50	50	50	
	D	-	-	40	45	50	50	50	50	50	
FAST FOOD	C	-	25	25	30	30	35	35	35	35	
SERVICE STN.	C	-	-	25	30	30	35	35	35	35	

AVERAGE LIFE TABLES

(IN YEARS)

TYPE	CONST. TYPE OR RATING	FOR ALL QUALITIES	
		AVG. LIFE IN YEARS	
COLD STORAGE - FOOD LOCKERS	Cheap	20	
	Average	30	
	Good	40	
COLD STORAGE - WAREHOUSES	Cheap	30	
	Average	40	
	Good	50	
DRIVE-IN THEATRES	Cheap	20	
	Good	25	
GREENHOUSES - COMMERCIAL	Cheap Wood Frame	20	
	Avg. Quality Frame	20	
	Good	30	
MOTOR TRUCK SCALES	Wood Understructure	20	
	Conc. Understructure	30	
SERVICE STATIONS	Cheap Frame	20	
	Good Frame	25	
STEEL BUILDINGS - QUONSET OR STRAIGHT WALL TYPE	Light	30	
	Medium	40	
	Heavy	50	

NOTE: When a decimal classification is used (e.g. 5.5), apply the average life for the next whole classification - (e.g. 6).

NORMAL PER CENT GOOD TABLES

20 YRS. AV.LIFE			25 YRS. AV.LIFE			30 YRS. AV.LIFE			35 YRS. AV.LIFE			40 YRS. AV.LIFE		
R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD
20	0	100	25	0	100	30	0	100	35	0	100	40	0	100
19	1	95	24	1	97	29	1	98	34	1	99	38	2	98
18	2	90	23	2	93	28	2	96	33	2	97	36	4	96
17	3	85	22	3	90	27	3	93	32	3	95	34	6	93
16	4	79	21	4	86	26	4	90	31	4	93	32	8	90
15	5	73	20	5	82	25	5	88	30	5	91	30	10	86
14	6	67	19	6	78	24	6	85	29	6	89	28	12	82
13	7	61	18	7	74	23	7	82	28	7	87	26	14	78
12	8	56	17	8	70	22	8	79	27	8	85	24	16	73
11	9	51	16	9	65	21	9	75	26	9	83	22	18	68
10	10	49	15	10	60	20	10	72	25	10	80	20	20	63
9	11	48	14	11	56	19	11	68	24	11	78	18	22	58
9	12	46	13	12	52	18	12	65	23	12	75	17	24	53
8	13	44	12	13	50	17	13	61	22	13	72	15	26	50
7	14	43	11	14	48	16	14	58	21	14	69	14	28	48
6	15	43	10	15	47	15	15	54	20	15	66	13	30	47
6	16	41	9	16	46	14	16	50	19	16	63	11	32	45
5	17	39	8	17	45	13	17	49	18	17	60	10	34	44
5	18	38	8	18	44	12	18	48	17	18	57	9	36	43
5	19	37	7	19	43	12	19	47	16	19	54	8	38	42
4	20	35	7	20	42	11	20	47	15	20	51	8	40	40
4	21	34	6	21	41	11	21	46	14	21	50	7	42	39
4	22	33	6	22	40	10	22	45	13	22	49	6	44	38
3	23	32	5	23	39	10	23	44	13	23	48	6	46	36
3	24	30	5	24	38	9	24	43	12	24	47	5	48	35
3	25	29	5	25	37	9	25	43	12	25	47	5	50	34
3	26	28	4	26	36	8	26	42	11	26	46	4	52	32
2	27	27	4	27	35	8	27	41	11	27	45	4	54	31
2	28	25	4	28	34	7	28	40	10	28	44	3	56	30
2	29	24	4	29	33	7	29	39	10	29	43	3	58	29
2	30	22	3	30	32	6	30	38	9	30	43	3	60	27
2	31	21	3	31	31	6	31	37	9	31	42	2	62	26
1	32	20	3	32	30	5	32	36	8	32	42	2	64	25
			3	33	29	5	33	35	8	33	41	2	66	24
			3	34	28	5	34	35	7	34	40	2	68	22
			2	35	27	5	35	34	7	35	39	2	70	21
			2	36	26	4	36	33	6	36	38	1	72	20
			2	38	24	4	38	32	6	38	37			
			2	40	22	3	40	30	5	40	36			
			1	42	20	3	42	28	5	42	34			
						2	45	26	4	45	32			
						1	48	23	3	48	30			
						1	52	20	3	52	27			
									2	50	24			
									1	62	20			

NORMAL PER CENT GOOD TABLES

45 YRS. AV.LIFE			50 YRS. AV.LIFE			55 YRS. AV.LIFE			60 YRS. AV.LIFE			70 YRS. AV.LIFE		
R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD	R.E.L.	CHRON AGE	% GOOD
45	0	100	50	0	100	55	0	100	60	0	100	70	0	100
43	2	99	48	2	99	53	2	99	58	2	99	68	2	99
41	4	97	46	4	98	51	4	98	56	4	99	66	4	99
39	6	95	44	6	97	49	6	97	54	6	98	64	6	99
37	8	93	42	8	95	47	8	96	52	8	97	62	8	98
35	10	90	40	10	93	45	10	95	50	10	96	60	10	98
33	12	87	38	12	91	43	12	94	48	12	95	58	12	97
31	14	84	36	14	88	41	14	92	46	14	94	56	14	96
29	16	81	34	16	85	39	16	90	44	16	93	54	16	96
27	18	77	32	18	82	37	18	88	42	18	92	52	18	95
25	20	73	30	20	80	35	20	86	40	20	89	50	20	94
23	22	69	28	22	77	33	22	83	38	22	87	48	22	93
21	24	65	26	24	73	31	24	80	36	24	85	46	24	92
20	26	60	24	26	69	29	26	77	34	26	83	45	26	91
18	28	55	23	28	65	27	28	74	32	28	81	42	28	89
17	30	50	21	30	61	26	30	71	30	30	78	40	30	87
15	32	49	20	32	57	24	32	67	29	32	75	39	32	85
14	34	48	18	34	53	22	34	63	27	34	72	37	34	83
13	36	47	17	36	50	21	36	59	25	36	69	35	36	81
12	38	46	16	38	48	19	38	55	24	38	66	33	38	79
11	40	44	14	40	47	18	40	52	22	40	63	31	40	76
10	42	43	13	42	46	17	42	50	21	42	60	30	42	73
9	44	42	12	44	45	16	44	49	20	44	56	29	44	70
8	46	41	11	46	44	15	46	48	18	46	52	27	46	67
7	48	40	10	48	43	14	48	47	17	48	49	26	48	64
7	50	38	10	50	42	13	50	45	16	50	48	25	50	61
6	52	37	9	52	41	12	52	44	15	52	47	23	52	58
6	54	36	8	54	40	11	54	43	14	54	46	22	54	56
5	56	35	8	56	39	10	56	42	13	56	46	21	56	54
5	58	34	7	58	38	9	58	41	12	58	45	20	58	52
4	60	32	7	60	37	9	60	40	11	60	44	19	60	50
4	62	31	6	62	36	8	62	39	10	64	42	17	64	48
4	64	30	6	64	35	8	64	38	9	68	40	15	68	46
3	66	29	5	66	34	7	66	37	8	72	38	13	72	44
3	68	28	5	68	33	7	68	36	7	76	36	12	76	43
3	70	27	4	70	32	6	70	36	6	80	35	11	80	41
3	72	25	4	72	31	6	72	35	5	86	32	9	86	39
2	74	24	4	74	30	5	74	34	4	92	29	8	92	36
2	76	23	3	76	28	5	76	32	3	100	25	6	100	33
1	82	20	3	82	26	4	82	30	2	108	22	4	108	29
			2	84	24	4	84	29	1	112	20	3	112	27
			2	88	22	3	88	27				2	122	24
			1	92	20	2	92	25				1	130	20
						2	96	23						
						1	102	20						

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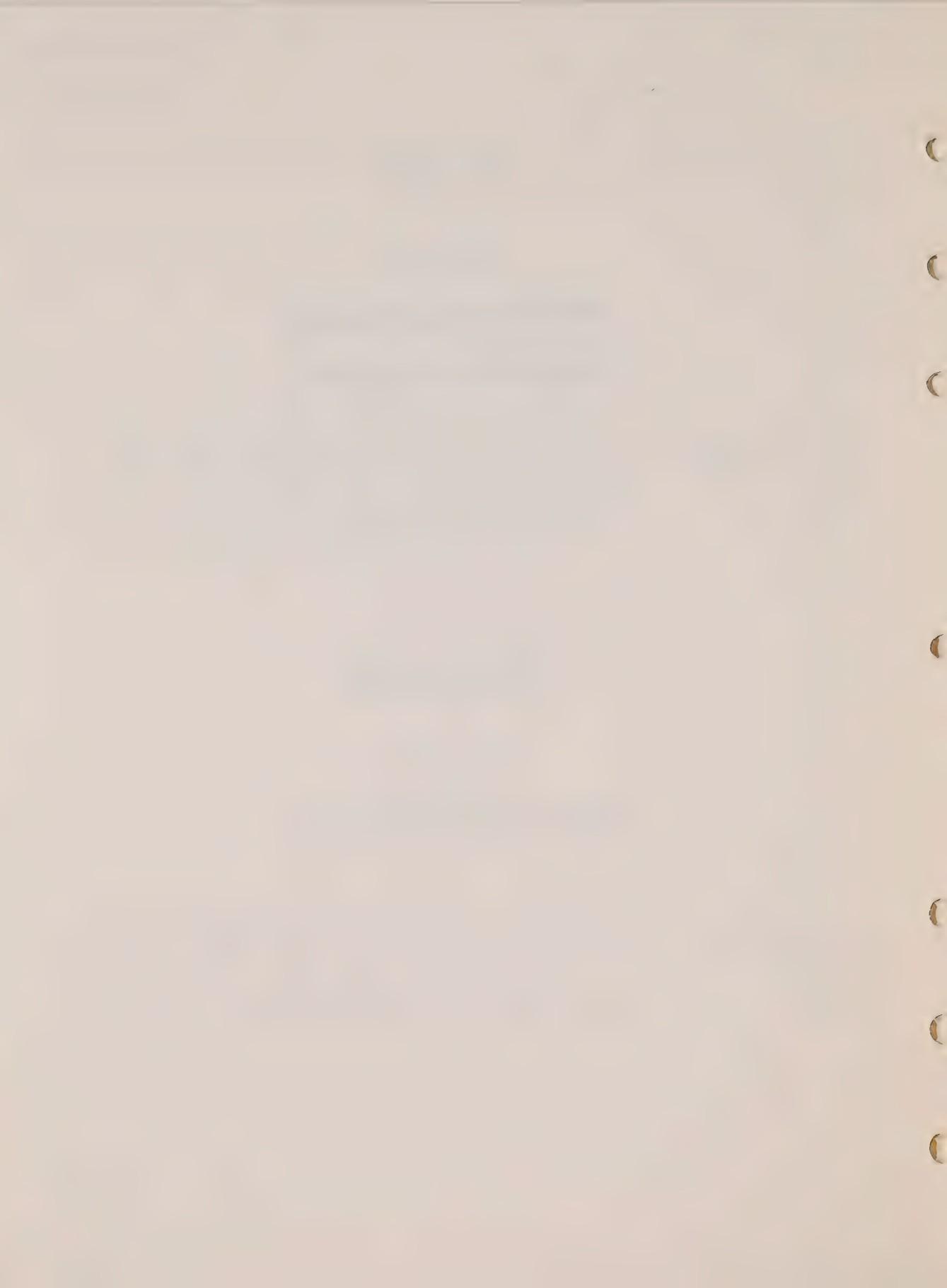
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SKI - LIFTSTABLE FORNORMAL-PHYSICAL DEPRECIATIONAND FUNCTIONAL OBSOLESCENCECHRONOLOGICAL AGE% GOOD

0 - 1	2 & 3	4 & 5	6 & 7	8 & 9	10 & over
70	60	50	40	30	20

OVERHEAD - CRANESTABLE FORNORMAL PHYSICAL DEPRECIATIONCHRONOLOGICAL AGE% GOOD

0 - 1	2 & 3	4 & 5	6 & 7	8 & 9	10 & over
80	70	60	50	40	30







IN-PLACE COSTS

GENERAL COMMENTS

The unit in-place costs shown on the following pages have only been inserted as a guide, and should not be used for a quantity take-off valuation. The intent of this section is to give the assessor an idea of the relationship between materials which is important in the "weighting" process of the classification system.

The unit in-place costs in this section are based on information developed from a base year of 1969.



IN-PLACE COSTS

FOUNDATIONS

<u>EXCAVATION:</u>	U N I T	IN PLACE C O S T
Clear Site	Sq. Ft.	\$ 0.05
Strip & Stock Pile	Cu. Yd.	0.55
Bulk Excavation Incl. Disposal	Cu. Yd.	1.00
Trench Excavation Incl. Back-Fill	Cu. Yd.	1.75
Pier or Isolated Excavation Incl. Back-Fill	Cu. Yd.	2.50

CONCRETE FOOTINGS

Concrete Footings for 6" Thick Wall	Lin. Ft.	0.91
Concrete Footings for 8" Thick Wall	Lin. Ft.	1.24
Concrete Footings for 10" Thick Wall	Lin. Ft.	1.40
Concrete Footings for 12" Thick Wall	Lin. Ft.	2.30
Concrete Footings for 16" Thick Wall	Lin. Ft.	2.69

CONCRETE WALLS (UNREINFORCED)

Concrete Wall 6" Thick	Sq. Ft.	1.48
Concrete Wall 8" Thick	Sq. Ft.	1.60
Concrete Wall 10" Thick	Sq. Ft.	1.75
Concrete Wall 12" Thick	Sq. Ft.	1.95
Concrete Wall 16" Thick	Sq. Ft.	2.20

CONCRETE WALLS (REINFORCED)

Concrete Wall 6" Thick	Sq. Ft.	1.75
Concrete Wall 8" Thick	Sq. Ft.	1.95
Concrete Wall 10" Thick	Sq. Ft.	2.15
Concrete Wall 12" Thick	Sq. Ft.	2.50
Concrete Wall 16" Thick	Sq. Ft.	3.00

I N - P L A C E C O S T S

FOUNDATIONS

<u>CONCRETE BLOCK WALL (HOLLOW)</u>	U N I T	IN PLACE C O S T
Concrete Block Wall 4" Thick	Sq. Ft.	\$ 0.68
Concrete Block Wall 6" Thick	Sq. Ft.	0.80
Concrete Block Wall 8" Thick	Sq. Ft.	0.90
Concrete Block Wall 10" Thick	Sq. Ft.	1.00
Concrete Block Wall 12" Thick	Sq. Ft.	1.10
<u>CONCRETE BLOCK WALL (SOLID)</u>		
Concrete Block Wall 4" Thick	Sq. Ft.	0.76
Concrete Block Wall 6" Thick	Sq. Ft.	0.87
Concrete Block Wall 8" Thick	Sq. Ft.	0.98
Concrete Block Wall 10" Thick	Sq. Ft.	1.12
Concrete Block Wall 12" Thick	Sq. Ft.	1.24
<u>CONCRETE FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS (UNREINFORCED)</u>		
Walls 6" Thick	Lin. Ft.	7.00
Walls 8" Thick	Lin. Ft.	7.78
Walls 10" Thick	Lin. Ft.	8.66
Walls 12" Thick	Lin. Ft.	10.09
Walls 16" Thick	Lin. Ft.	11.76
<u>CONCRETE FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS (REINFORCED)</u>		
Wall 6" Thick	Lin. Ft.	8.32
Wall 8" Thick	Lin. Ft.	9.47
Wall 10" Thick	Lin. Ft.	10.64
Wall 12" Thick	Lin. Ft.	12.35
Wall 16" Thick	Lin. Ft.	14.68

IN-PLACE COSTS

FOUNDATIONSCONCRETE BLOCK (HOLLOW) FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS

	U N I T	IN PLACE C O S T
Walls 6" Thick	Lin. Ft.	\$ 4.10
Walls 8" Thick	Lin. Ft.	4.84
Walls 10" Thick	Lin. Ft.	5.40
Walls 12" Thick	Lin. Ft.	6.70

CONCRETE BLOCK (SOLID) FOUNDATION WALLS 4'0" HIGH WITH FOOTINGS

Walls 6" Thick	Lin. Ft.	4.54
Walls 8" Thick	Lin. Ft.	5.39
Walls 10" Thick	Lin. Ft.	5.84
Walls 12" Thick	Lin. Ft.	7.21

CONCRETE PILES (PRE-CAST)

10" Diameter	Lin. Ft.	6.00 - 7.00
12" Diameter	Lin. Ft.	6.75 - 7.75
14" Diameter	Lin. Ft.	7.50 - 8.50
16" Diameter	Lin. Ft.	8.25 - 9.25
20" Diameter	Lin. Ft.	10.00 - 10.75

CONCRETE PILES (POURED IN PLACE)

8" Diameter	Lin. Ft.	12.00 - 18.00
10" Diameter	Lin. Ft.	13.00 - 19.00
12" Diameter	Lin. Ft.	14.00 - 20.00
16" Diameter	Lin. Ft.	15.00 - 22.00
20" Diameter	Lin. Ft.	16.00 - 25.00
24" Diameter	Lin. Ft.	18.00 - 25.00
30" Diameter	Lin. Ft.	20.00 - 30.00

IN-PLACE COSTS

<u>FOUNDATIONS</u>		UNIT	IN PLACE COST
CONCRETE FOOTINGS FOR COLUMNS (REINFORCED)			
3"	x 3" x 1" - SIZE	Each	\$ 15.00
4"	x 4" x 1" - SIZE	Each	29.00
5"	x 5" x 1" - SIZE	Each	36.00
6"	x 6" x 1" - SIZE	Each	50.00
7"	x 7" x 1" - SIZE	Each	68.00
8"	x 8" x 1" - SIZE	Each	82.00
9"	x 9" x 1" - SIZE	Each	98.00
10"	x 10" x 1" - SIZE	Each'	120.00
<u>CONCRETE FOR COLUMNS</u>		Cu. Yd.	135.00
<u>CONCRETE SLABS ON GRADE</u>			
3"	Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.30
4"	Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.40
5"	Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.50
6"	Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.60
7"	Conc. Slab With W.W. Mesh and Steel Trowel Finish	Sq. Ft.	0.70
8"	Conc. Slab With Nominal Reinf. and Steel Trowel Finish	Sq. Ft.	0.85
9"	Conc. Slab With Nominal Reinf. and Steel Trowel Finish	Sq. Ft.	0.95
E/O GRAVEL FILL UNDER SLAB ON GRADE.		Sq. Ft.	0.10

IN-PLACE COSTS

FOUNDATIONS

<u>STEEL PILES</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
H - SECTION		
8" x 8" x 36#	Lin. Ft.	\$ 4.50 - 5.50
10 x 10 x 42#	Lin. Ft.	5.75 - 6.50
10 x 10 x 57#	Lin. Ft.	6.75 - 8.00
12 x 12 x 53#	Lin. Ft.	6.60 - 7.90
12 x 12 x 74#	Lin. Ft.	9.00 - 10.00
14 x 14 x 73#	Lin. Ft.	8.80 - 9.90
14 x 14 x 89#	Lin. Ft.	10.00 - 11.00
<u>SHEET PILING</u>	<u>Sq. Ft.</u>	<u>4.50 - 7.50</u>
WOOD PILES		
UNTREATED 20' - 50' DEEP	Lin. Ft.	2.30 - 3.25
UNTREATED 50' - 90' DEEP	Lin. Ft.	3.10 - 3.75
TREATED 20' - 50' DEEP	Lin. Ft.	3.20 - 3.75
TREATED 50' - 90' DEEP	Lin. Ft.	3.60 - 4.20
<u>CEMENT FINISHING</u>		
Steel Trowel Finish	Sq. Ft.	0.08
Broom Finish	Sq. Ft.	0.04
Sidewalk Finish	Sq. Ft.	0.15
Herringbone Finish	Sq. Ft.	0.22
Non Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	0.12
Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	0.12
Metallic Hardener 60 lbs./100 S.F.	Sq. Ft.	0.14
Metallic Hardener 100 lbs./100 S.F.	Sq. Ft.	0.18
Non Metallic Hardener 60 lbs./100 S.F.	Sq. Ft.	0.14
Non Metallic Hardener 100 lbs./100 S.F.	Sq. Ft.	0.18

IN - PLACE COSTS

FOUNDATIONS

<u>CEMENT FINISHES (CONT.)</u>	U N I T	IN PLACE COST
Coloured Non Metallic Hardener 40 lbs./100 S.F.	Sq. Ft.	\$ 0.16
Coloured Non Metallic Hardener 60 lbs./100 S.F.	Sq. Ft.	0.20
Spark Resistant Metallic Hardener 180 lbs./100 S.F.	Sq. Ft.	0.50

WATERPROOFING

Membrane Water-proofing (1 ply)	Sq. Ft.	0.20
Membrane Water-proofing (2 ply)	Sq. Ft.	0.25
Membrane Water-proofing (3 ply)	Sq. Ft.	0.35
Water-proof coating	Sq. Ft.	0.09
Metallic Water-proofing	Sq. Ft.	0.20
P.V.C. Water-proofing	Sq. Ft.	0.50

INSULATION

STYROFOAM ADHERED TO CONCRETE

1" Thick -	Sq. Ft.	0.45
2" Thick -	Sq. Ft.	0.61
4" Thick - (2 Layer Application)	Sq. Ft.	1.13

STYROFOAM ADHERED TO CONCRETE PERIMETER FOUNDATION

1" Thick -	Sq. Ft.	0.45
1-1/2" Thick -	Sq. Ft.	0.54
2" Thick -	Sq. Ft.	0.63
Building (Asphalt)	Sq. Ft.	0.02
Building Paper (Foil One Side)	Sq. Ft.	0.03
Building Paper (Foil Both Sides)	Sq. Ft.	0.04
Reinf. Water Proof Paper (Asphalt)	Sq. Ft.	0.05

IN-PLACE COSTS

EXTERIOR CLADDING

<u>MISC. SIDINGS</u>	UNIT	IN PLACE COST
Asbestos Sheet (Flat) on Metal Frame	Sq. Ft.	\$ 0.70
Asbestos Sheet (Corr.) on Metal Frame	Sq. Ft.	0.85
Galv. Iron Sheet on Metal Frame	Sq. Ft.	0.30
1" x 8" Bevelled Siding (Cedar)	Sq. Ft.	0.75
2" x 6" Board & 1" x 8" Battens	Sq. Ft.	0.50
Redwood Siding.	Sq. Ft.	0.50
Stucco Finish	Sq. Ft.	0.50

FACE BRICK

Sand & Lime Brick	Sq. Ft.	1.50
Red Antique Brick	Sq. Ft.	1.70
Special Select Quality Brick	Sq. Ft.	1.85
Concrete Brick Back-up	Sq. Ft.	1.20

FLUTED BLOCK

4" Conc. Fluted Block	Sq. Ft.	0.87
6" Conc. Fluted Block	Sq. Ft.	0.97
8" Conc. Fluted Block	Sq. Ft.	1.07
10" Conc. Fluted Block	Sq. Ft.	1.16
12" Conc. Fluted Block	Sq. Ft.	1.25

PORCELAIN ENAMEL PANELS (INCL. DRIP FLASHING & CAP FLASHING)

16 Gauge-Enamel Finish with 1" Styrofoam Core	Sq. Ft.	2.20
16 Gauge-Enamel Finish with 2" Styrofoam Core	Sq. Ft.	2.35
16 Gauge-Enamel Finish with 1" Urethane Core	Sq. Ft.	2.40
16 Gauge-Enamel Finish with 2" Urethane Core	Sq. Ft.	2.55

IN-PLACE COSTS

EXTERIOR CLADDING

	U N I T	IN PLACE C O S T
<u>BAKED ENAMEL FINISH SIDING (INCL. DRIP FLASHING & CAP FLASHING)</u>		
22 Gauge with 1-1/2" Insulation	Sq. Ft.	\$ 2.00
20 Gauge with 1-1/2" Insulation	Sq. Ft.	2.20
18 Gauge with 1-1/2" Insulation	Sq. Ft.	2.40

NOTE: For 2" Insulation add 3% -- For 3" Insulation add 6% --
For plain galv. finish deduct 10%

ALUM. BAKED ENAMEL SIDING (INCL. DRIP FLASHING & CAP FLASHING)

22 Gauge with 1-1/2" Fiberglass Insulation	Sq. Ft.	2.20
20 Gauge with 1-1/2" Fiberglass Insulation	Sq. Ft.	2.40
18 Gauge with 1-1/2" Fiberglass Insulation	Sq. Ft.	2.70

NOTE: For 2" Insulation add 3% -- For 3" Insulation add 6% --
For plain alum. siding deduct 10%

	Cost Per Sq. Ft.				
	2"	4"	5"	6"	8"
Grey Ordinary Finish	3.50	3.60	3.70	4.00	4.30
Exposed Common Aggregate	3.75	3.75	3.85	4.15	4.45
White Acid Etched	3.80	3.80	3.90	4.05	4.40
Exposed Fancy Aggregate	4.00	4.00	4.10	4.40	4.70
Sand Blasted Finish	3.75	3.75	3.85	4.15	4.45
Extra Over for Bush Hammered Flush	0.50	0.50	0.50	0.50	0.50
Extra Over for 2" Insulation	0.28	0.28	0.28	0.28	0.28

PRECAST PANELS WITH PUNCHED IN WINDOWS

Cost same as precast panels, but do not deduct for window openings.

IN-PLACE COSTS

EXTERIOR CLADDING

<u>ALUM. WINDOWS</u>	U N I T	IN PLACE C O S T
Plain Window - Single Glazing (Up to 3/16" Glass)	Sq. Ft.	\$3.50 - 4.50
- Double Glazing (Up to 3/16" Glass)	Sq. Ft.	5.50 - 7.00
Plain Window - Single Glazing (Plate Glass)	Sq. Ft.	4.50 - 5.50
- Double Glazing (Plate Glass)	Sq. Ft.	7.50 - 9.00
Extra Over For Coloured Frame	Sq. Ft.	0.50
Extra Over For Tinted Glass	Sq. Ft.	0.50
Extra Over For Polished Wire Glass	Sq. Ft.	2.00
Casement Windows (Vented Area Only)	Each	75.00
Double Hung or Side Slide	Sq. Ft.	3.00 - 4.00
Double Double Hung or Double Slide	Sq. Ft.	7.00 - 9.00
Venetian Blinds Between Double Glaz.	Sq. Ft.	2.50

CURTAIN WALL (2'6" to 4'6" MODULE)

Single Glazing Incl. Insulated Panel	Sq. Ft.	6.50 - 7.50
Double Glazing Incl. Insulated Panel	Sq. Ft.	8.00 - 9.25
Extra Over For Insulated Glass	Sq. Ft.	1.50
Extra Over for Coloured Glass	Sq. Ft.	2.00
Extra Over for Vented Area	Sq. Ft.	20.00

WOOD WINDOWS

FIXED WINDOWS

Single Glaze	Sq. Ft.	3.60
Double Glaze	Sq. Ft.	4.25

I N - P L A C E C O S T S

EXTERIOR CLADDING

	U N I T	IN PLACE C O S T
<u>AWNING WINDOWS</u>		
Single Glaze	Sq. Ft.	\$ 4.10
Double Glaze	Sq. Ft.	4.75
<u>CASEMENT WINDOWS</u>		
Single Glaze	Sq. Ft.	6.80
Double Glaze	Sq. Ft.	8.00
Steel Sash - Industrial - Partially Vented	Sq. Ft.	3.00
Steel Sash - Office	Sq. Ft.	4.10
Steel Sash - Office - Baked Enamel Finish	Sq. Ft.	7.30

IN-PLACE COSTS

STRUCTURAL (STEEL)

ROOF TRUSSES

SPAN	TOP CHORD	BOTTOM CHORD	TYPE A OR B	TYPE C	TYPE D	TYPE D1	TYPE E
30'	2x2x $\frac{1}{4}$	2x2x $\frac{1}{4}$	\$220	\$245	\$255	\$245	\$250
40'	2 $\frac{1}{2}$ x2 $\frac{1}{2}$ x $\frac{1}{4}$	2 $\frac{1}{2}$ x2 $\frac{1}{2}$ x $\frac{1}{4}$	365	395	405	400	400
50'	2 $\frac{1}{2}$ x2 $\frac{1}{2}$ x $\frac{1}{4}$	3x2 $\frac{1}{2}$ x5/16	455	500	515	500	505
60'	3x2 $\frac{1}{2}$ x16	4x3x5/16	800	860	875	880	870
70'	3x3x5/16	4x3x5/16	985	1065	1085	1085	1075
80'	4x3x5/16	4x3x5/16	1275	1380	1410	1400	1400
90'	4x3x5/16	4x3x5/16	1390	1525	1555	1530	1540
100'	4x3x5/16	4x3x5/16	1615	1785	1825	1775	1810

TRUSS TYPES

'A'-Fink or Howe, or modified

'D'-Quadrangular, angle bracing

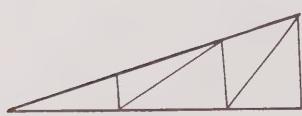
'B'-Pratt

'D1'-Quadrangular, tie rod bracing

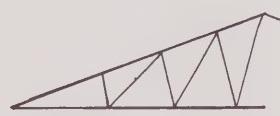
'C'-Monitor Fink or Howe or Pratt

'E'-Saw Tooth Modified Fink, Howe or Pratt.

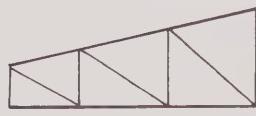
TRUSS SECTIONS



'A'=Fink; Modified



'B'=Pratt



'D'=Quadrangular

NOTE: The above Cost Factors are for Light Trusses.

To convert to Medium Type Trusses, multiply by 1.25%

To convert to Heavy Type Trusses, multiply by 1.45%

I N - P L A C E C O S T S

S T R U C T U R A L

T Y P I C A L S T E E L F R A M I N G

(BASE 55 LBS. PER SQ. FT. - HEIGHT 16'0")

BAY SIZE	U N I T	IN PLACE COSTS
20' x 20'	Sq. Ft.	\$ 0.85
20' x 30'	Sq. Ft.	0.95
30' x 30'	Sq. Ft.	1.05
30' x 40'	Sq. Ft.	1.15
35' x 40'	Sq. Ft.	1.20
40' x 40'	Sq. Ft.	1.25

NOTE: Add 10% for misc. steel bolts, etc. in large projects over 50,000 sq. ft.

When steel frame is wall bearing deduct 25% from above costs.

Adjust above factors by 3% for each foot of variation in height.

I N - P L A C E C O S T S
S T R U C T U R A L
(CONCRETE)

T Y P I C A L F L O O R S Y S T E M S

DESCRIPTION	UNIT	IN PLACE COSTS
Flat Plates - including Beams and Columns.	Sq.Ft.	\$ 2.50
One way Solid Slabs - including Beams and Columns.	Sq.Ft.	2.65
Waffle Slabs - including Beams and Columns.	Sq.Ft.	3.05
Two way Solid Slabs - including Beams and Columns.	Sq.Ft.	2.85

P R E C A S T C O N C R E T E

DESCRIPTION	UNIT	IN PLACE COSTS
Planks - 4" Thick	Sq.Ft.	\$ 1.40
Flexicore Slab - 6" Thick	Sq.Ft.	1.55
Flexicore Slab - 8" Thick	Sq.Ft.	1.60
Flexicore Slab - 10" Thick	Sq.Ft.	1.70
Roof Decking Single 'Tee'	Sq.Ft.	2.00-2.75
Roof Decking Double 'Tee'	Sq.Ft.	2.00-2.75

IN-PLACE COSTS

STRUCTURAL (TIMBER) LAMINATED WOOD STRUCTURES

DESCRIPTION	COST PER CU. FT.
Plain Straight Beams (in place)	\$ 7.50
Slightly Curved Beams (in place)	\$ 7.90
Ornamental Beams (in place)	\$7.90 - 10.00

WOOD ROOF TRUSSES - INDUSTRIAL

(BOWSTRING OR ARCHED)

COST PER SPAN

DESCRIPTION	SPAN IN FEET								
	30'	40'	50'	60'	70'	80'	90'	100'	120'
LIGHT	\$145	\$160	\$185	\$265	\$370	\$505	\$625	\$765	\$930
MEDIUM	180	195	230	325	450	615	765	930	1135
HEAVY	215	230	270	385	530	725	900	1097	1340

DESIGNED: - 40 lb. per sq. ft. - total roof load.

WOOD ROOF TRUSSES - INDUSTRIAL

(BELGIAN TYPE)

COST PER SPAN

DESCRIPTION	SPAN IN FEET							
	30'	40'	50'	60'	70'	80'	90'	100'
LIGHT	\$215	\$240	\$280	\$400	\$555	\$755	\$940	\$1150
MEDIUM	270	295	345	490	675	925	1150	1395
HEAVY	325	345	405	580	795	1090	1350	1645

DESIGNED: 40 lb. per sq. ft. - total roof load.

NOTE: The above Cost Factors do not include purlins or sheathing.
These Cost Factors do not apply to residential or farm buildings.

IN-PLACE COSTS

STRUCTURES

POSTS & BEAMS - LAMINATED WOOD

<u>DOUGLAS FIR</u>	<u>UNIT</u>	<u>IN PLACE COSTS</u>
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3 - 2" x 8" Posts	Lin. Ft.	\$ 1.34
4 - 2" x 8" Posts	Lin. Ft.	1.78
5 - 2" x10" Posts	Lin. Ft.	2.88
4 - 2" x12" Posts	Lin. Ft.	2.84
5 - 2" x12" Posts	Lin. Ft.	3.55

3 - 2" x 8" Beams	Lin. Ft.	1.36
4 - 2" x 8" Beams	Lin. Ft.	1.81
5 - 2" x10" Beams	Lin. Ft.	2.92
4 - 2" x12" Beams	Lin. Ft.	2.88
5 - 2" x12" Beams	Lin. Ft.	3.60

SPRUCE

3 - 2" x 8" Posts	Lin. Ft.	1.06
4 - 2" x 8" Posts	Lin. Ft.	1.41
5 - 2" x10" Posts	Lin. Ft.	2.23
4 - 2" x12" Posts	Lin. Ft.	2.16
5 - 2" x12" Posts	Lin. Ft.	2.70

3 - 2" x 8" Beams	Lin. Ft.	1.08
4 - 2" x 8" Beams	Lin. Ft.	1.44
5 - 2" x10" Beams	Lin. Ft.	2.28
4 - 2" x12" Beams	Lin. Ft.	2.20
5 - 2" x12" Beams	Lin. Ft.	2.75

I N - P L A C E C O S T S

S T R U C T U R E S

WOOD JOIST - FLOOR FRAMING

<u>DOUGLAS FIR</u>		<u>UNIT</u>	<u>IN PLACE COSTS</u>
2" x 6"	joists & bridging 12" o.c.	Sq. Ft.	\$.44
2" x 8"	joists & bridging 12" o.c.	Sq. Ft.	.50
2" x10"	joists & bridging 12" o.c.	Sq. Ft.	.70
2" x12"	joists & bridging 12" o.c.	Sq. Ft.	.84
2" x 6"	joists & bridging 16" o.c.	Sq. Ft.	.36
2" x 8"	joists & bridging 16" o.c.	Sq. Ft.	.44
2" x10"	joists & bridging 16" o.c.	Sq. Ft.	.55
2" x12"	joists & bridging 16" o.c.	Sq. Ft.	.67
2" x 6"	joists & bridging 24" o.c.	Sq. Ft.	.26
2" x 8"	joists & bridging 24" o.c.	Sq. Ft.	.34
2" x10"	joists & bridging 24" o.c.	Sq. Ft.	.38
2" x12"	joists & bridging 24" o.c.	Sq. Ft.	.46
<u>SPRUCE</u>			
2" x 6"	joists & bridging 12" o.c.	Sq. Ft.	.34
2" x 8"	joists & bridging 12" o.c.	Sq. Ft.	.44
2" x10"	joists & bridging 12" o.c.	Sq. Ft.	.50
2" x12"	joists & bridging 12" o.c.	Sq. Ft.	.59
2" x 6"	joists & bridging 16" o.c.	Sq. Ft.	.30
2" x 8"	joists & bridging 16" o.c.	Sq. Ft.	.36
2" x10"	joists & bridging 16" o.c.	Sq. Ft.	.44
2" x12"	joists & bridging 16" o.c.	Sq. Ft.	.51
2" x 6"	joists & bridging 24" o.c.	Sq. Ft.	.22
2" x 8"	joists & bridging 24" o.c.	Sq. Ft.	.26
2" x10"	joists & bridging 24" o.c.	Sq. Ft.	.30
2" x12"	joists & bridging 24" o.c.	Sq. Ft.	.36

ADD 3% for Headers and Hardware.

IN-PLACE COSTS
STRUCTURESROOF FRAMING

<u>HIP ROOF - SPRUCE</u>		UNIT	IN PLACE COSTS
2" x 4"	rafters 16" o.c.	Sq. Ft.	\$.18
2" x 6"	rafters 16" o.c.	Sq. Ft.	.25
2" x 8"	rafters 16" o.c.	Sq. Ft.	.31
2" x10"	rafters 16" o.c.	Sq. Ft.	.46
2" x12"	rafters 16" o.c.	Sq. Ft.	.54
2" x 4"	rafters 24" o.c.	Sq. Ft.	.12
2" x 6"	rafters 24" o.c.	Sq. Ft.	.18
2" x 8"	rafters 24" o.c.	Sq. Ft.	.25
2" x10"	rafters 24" o.c.	Sq. Ft.	.32
2" x12"	rafters 24" o.c.	Sq. Ft.	.39
<u>GABLE ROOF - SPRUCE</u>			
2" x 4"	rafters 16" o.c.	Sq. Ft.	.18
2" x 6"	rafters 16" o.c.	Sq. Ft.	.24
2" x 8"	rafters 16" o.c.	Sq. Ft.	.29
2" x10"	rafters 16" o.c.	Sq. Ft.	.43
2" x12"	rafters 16" o.c.	Sq. Ft.	.52
2" x 4"	rafters 24" o.c.	Sq. Ft.	.12
2" x 6"	rafters 24" o.c.	Sq. Ft.	.18
2" x 8"	rafters 24" o.c.	Sq. Ft.	.24
2" x10"	rafters 24" o.c.	Sq. Ft.	.30
2" x12"	rafters 24" o.c.	Sq. Ft.	.37
<u>SHED ROOF - SPRUCE</u>			
2" x 4"	rafters 16" o.c.	Sq. Ft.	.17
2" x 6"	rafters 16" o.c.	Sq. Ft.	.22
2" x 8"	rafters 16" o.c.	Sq. Ft.	.31
2" x10"	rafters 16" o.c.	Sq. Ft.	.41
2" x12"	rafters 16" o.c.	Sq. Ft.	.49
2" x 4"	rafters 24" o.c.	Sq. Ft.	.11
2" x 6"	rafters 24" o.c.	Sq. Ft.	.17
2" x 8"	rafters 24" o.c.	Sq. Ft.	.22
2" x10"	rafters 24" o.c.	Sq. Ft.	.29
2" x12"	rafters 24" o.c.	Sq. Ft.	.35

IN-PLACE COSTS

ROOF STRUCTURE

	U N I T	IN PLACE C O S T
<u>Metal Deck -</u>		
1-1/2" - 22 gauge	Sq. Ft.	\$ 0.30
1-1/2" - 20 gauge	Sq. Ft.	0.32
3" - 20 gauge	Sq. Ft.	0.60
3" - 18 gauge	Sq. Ft.	0.62
<u>Lightweight Precast Slabs -</u>		
2'-0" Span	Sq. Ft.	0.42
4'-0" Span	Sq. Ft.	0.50
8'-0" Span	Sq. Ft.	0.55
10'-0" Span	Sq. Ft.	0.62
15'-0" Span	Sq. Ft.	0.85
20'-0" Span	Sq. Ft.	1.20
<u>Precast Slabs -</u>		
Single "T" 30'-60' Span	Sq. Ft.	2.10 - 2.35
Single "T" 70'-100' Span	Sq. Ft.	2.35 - 2.75
Double "T" 30'-60' Span	Sq. Ft.	1.60 - 1.75
Double "T" 70'-100' Span	Sq. Ft.	1.50 - 1.60
Flat Slab Up To 30' Span	Sq. Ft.	1.60

WOOD DECK

(Western Red Cedar, Western or Eastern Spruce or Western Hemlock.)

1 5/8" Commercial Grade	Sq. Ft.	0.44
2 5/8" Commercial Grade	Sq. Ft.	0.67
3 5/8" Commercial Grade	Sq. Ft.	0.92
1 5/8" Select Grade	Sq. Ft.	0.67
2 5/8" Select Grade	Sq. Ft.	0.99
3 5/8" Select Grade	Sq. Ft.	1.36

IN-PLACE COSTS

ROOF FINISHES

	UNIT	IN PLACE COST
Built Up Roofing Incl. Gravel Over Wood and Steel Deck - 3 Ply	Sq. Ft.	\$ 0.22
Built Up Roofing Incl. Gravel Over Wood and Steel Deck - 4 Ply	Sq. Ft.	0.26
Built Up Roofing Incl. Gravel Over Wood and Steel Deck - 5 Ply	Sq. Ft.	0.30
Built Up Roofing Incl. Gravel Over Conc. Deck - 3 Ply	Sq. Ft.	0.23
Built Up Roofing Incl. Gravel Over Conc. Deck - 4 Ply	Sq. Ft.	0.26
Built Up Roofing Incl. Gravel Over Conc. Deck - 5 Ply	Sq. Ft.	0.30
Corrugated Galv. Iron Sheet on Wood or Metal Frame	Sq. Ft.	0.70
Alum. Sheet on Wood or Metal Frame	Sq. Ft.	2.20
1/4" to 3/8" Asbestos Sheet on Wood or Metal Frame	Sq. Ft.	1.00
Shingle - Standard Cedar	Sq. Ft.	0.75
Shingle - Asphalt	Sq. Ft.	0.20
Shingle - Asbestos	Sq. Ft.	0.55
Shingle - Slate	Sq. Ft.	3.00
Roof Insulation - 1" Thick	Sq. Ft.	0.15
Roof Insulation - 1-1/2" Thick	Sq. Ft.	0.21
Roof Insulation - 2" Thick	Sq. Ft.	0.27
Roof Insulation - Paper Backed Urethane - 1" Thick	Sq. Ft.	0.28
Roof Insulation - Paper Backed Urethane - 2" Thick	Sq. Ft.	0.42

I N - P L A C E C O S T S

ROOF FINISHES

	U N I T	IN PLACE C O S T
Aluminum Flashing	Sq. Ft.	\$ 0.90
Copper Flashing	Sq. Ft.	2.00
Galv. Iron Flashing	Sq. Ft.	0.60
Stainless Steel Flashing	Sq. Ft.	1.90
6" Dia. Galv. Iron Gutter	Lin. Ft.	1.35
6" x 4" Copper Gutter	Lin. Ft.	3.00
6" Dia. Galv. Iron Rain Water Pipe	Lin. Ft.	1.45
6" Dia. Copper Rain Water Pipe	Lin. Ft.	3.00

IN - PLACE COSTS

FLOOR - FINISHES

	<u>U N I T</u>	<u>IN PLACE C O S T S</u>
Linoleum	Sq. Ft.	0.37
Parquet Flooring	Sq. Ft.	0.75
Hardwood Flooring	Sq. Ft.	0.75
Herringbone Hardwood Flooring	Sq. Ft.	2.00
Composite Wood-Plastic Flooring	Sq. Ft.	2.00
Ceramic	Sq. Ft.	1.20
Quarry Tile	Sq. Ft.	1.30
Terrazzo	Sq. Ft.	1.10 - 1.25
Epoxy Terrazzo	Sq. Ft.	1.60
Wood Block Flooring	Sq. Ft.	1.80
Vinyl Asbestos Tile .08 ga.	Sq. Ft.	0.27
Vinyl Asbestos Tile 1/8" ga.	Sq. Ft.	0.37
Vinyl With Cork Backing	Sq. Ft.	0.65
Rubber	Sq. Ft.	0.70
Slate Flooring 1/4" to 1"	Sq. Ft.	1.30 - 2.60
Carpet	Sq. Yd.	5.00 - 18.00
Brick Paving	Sq. Ft.	2.20
Acid Resistant Paving (Brick)	Sq. Ft.	2.40
Raised (Computer Flooring)	Sq. Ft.	4.50 - 5.00
Granite	Sq. Ft.	6.00 - 9.00
Polished Granite	Sq. Ft.	6.00 - 9.00
Marble	Sq. Ft.	5.00 - 9.00

I N - P L A C E C O S T S

FLOOR FINISHES

Acid Proof Paving (Brick)	Sq. Ft.	2.75
Travertine	Sq. Ft.	4.60
1-1/2 Wood Block (End Grain)	Sq. Ft.	1.50
Steel Grating - Painted	Sq. Ft.	2.60- 4.60
Seamless Floor	Sq. Ft.	.90
Latex Terrazzo	Sq. Ft.	1.30
Out Door Indoor Carpet	Sq. Yd.	7.00-10.00
Steel Grating Galv.	Sq. Ft.	4.00-12.00
4" Vinyl or Rubber Base	Lin.Ft.	0.25
4" Terrazzo Base	Lin.Ft.	1.80
6" Terrazzo Base	Lin.Ft.	2.00

IN-PLACE COSTS

WALL FINISHES

	UNIT	IN PLACE COSTS
Drywall Glued	Sq. Ft.	\$ 0.45
Drywall on Strapping	Sq. Ft.	0.57
Plaster	Sq. Ft.	0.60
Metal Lath & Plaster	Sq. Ft.	0.80
Plaster on Lath (Furred)	Sq. Ft.	1.00
Gypsum Lath 3/8" thick & plaster	Sq. Ft.	0.72
Acoustic Plaster	Sq. Ft.	0.80
Cement Plaster	Sq. Ft.	0.60
Stucco on Wood Frame	Sq. Ft.	0.60
Stucco on Block Wall	Sq. Ft.	0.43
Fibreboard	Sq. Ft.	0.40
Furring 1/2" x 6"	Sq. Ft.	0.20
Ceramic Tile on Plaster	Sq. Ft.	1.15
Ceramic Tile on conc. Block	Sq. Ft.	1.55
Terrazzo	Sq. Ft.	2.80
Marble	Sq. Ft.	4.50 - 6.50
Travertine	Sq. Ft.	4.00
Mirror-on-Wall	Sq. Ft.	3.50 - 4.00
Plexi Glass	Sq. Ft.	1.00 - 2.00
Carpet-on-Wall	Sq. Yd.	6.00 - 12.00

I N - P L A C E C O S T S

WALL FINISHES

	UNIT	IN PLACE C O S T S
<u>Stone Facing-Gramite</u>		
2" Granite Veneer	Sq. Ft.	12.00 - 12.00
3" Granite Veneer	Sq. Ft.	10.75 - 13.50
4" Granite Veneer	Sq. Ft.	12.00 - 15.00
Deduct for split face finish on granite	Sq. Ft.	2.30
<u>Light Weight Stone (Lava Stone)</u>	Sq. Ft.	2.50
<u>Lime Stone Veneer</u>		
2" thick flat panels	Sq. Ft.	4.50
3" thick flat panels	Sq. Ft.	5.00
Ashlar Veneer roughly 4" thick	Sq. Ft.	3.50 - 5.50
Sand Stone (Big panels-2" thick 4" thick)	Sq. Ft.	4.00
	Sq. Ft.	6.00
<u>Slate Veneer</u>		
1" thick panel (up to 3 sq. ft.)	Sq. Ft.	5.50
1" thick panel (up to 6 sq. ft.)	Sq. Ft.	6.50

IN-PLACE COSTS

CEILING FINISHES

	U N I T	IN PLACE C O S T
Drywall (Fixed with Adhesive)	Sq. Ft.	\$ 0.45
Plaster	Sq. Ft.	0.65
Metal Lath & Plaster	Sq. Ft.	0.95

CEILING TILE

Fiberglass 5/8" Thick - Plain	Sq. Ft.	0.40
Fiberglass 5/8" Thick - Finished	Sq. Ft.	0.50
Fiberglass 5/8" Thick Sculptured	Sq. Ft.	0.55
Fiberglass 5/8" Thick Vinyl Faced	Sq. Ft.	0.60
Mineral Fiber 5/8" Thick	Sq. Ft.	0.42
Mineral Fiber 3/4" Thick	Sq. Ft.	0.46
Mineral Fiber 3/4" Thick (Finished)	Sq. Ft.	0.65
Mineral Fiber 5/8" Thick - Alum. Faced	Sq. Ft.	0.58
Wood Fiber Tile 1/2" Thick	Sq. Ft.	0.30
Wood Fiber Tile 3/4" Thick	Sq. Ft.	0.35
1" x 3" Furring @ 12 c/c	Sq. Ft.	0.13
Fiberglass Boards 5/8"	Sq. Ft.	0.20
Fiberglass Boards 3/4"	Sq. Ft.	0.22
Mineral Fiber Boards 5/8" (Plain)	Sq. Ft.	0.20
Mineral Fiber Boards 5/8" (Finished)	Sq. Ft.	0.46
Three Dimensional - Painted	Sq. Ft.	0.32
Three Dimensional - Fabric Face	Sq. Ft.	0.58

I N - P L A C E C O S T S

CEILING FINISHES

	U N I T	IN PLACE C O S T
Luminous Panels (Prismatic) - Acrylic	Sq. Ft.	\$ 1.20
Luminous Panels (Prismatic) Polystyrene	Sq. Ft.	0.60
Luminous Panels - Flat or Ribbed -Acrylic	Sq. Ft.	1.10
Luminous Panels - Flat or Ribbed - Polystyrene	Sq. Ft.	0.45
Luminous Panels - Drop Pans - Acrylic	Sq. Ft.	1.90
Luminous Panels - Drop Pans - Polystyrene	Sq. Ft.	1.15
ADD For Suspension System		
"T" Bar - 2' x 4' Modules	Sq. Ft.	0.15
"T" Bar - 2' x 2' Modules	Sq. Ft.	0.20
Concealed "Z" Bar - 2' x 4' Modules	Sq. Ft.	0.15
Concealed "Z" Bar - 2' x 2' Modules	Sq. Ft.	0.20
Suspended Metal Pan With Acoustic Fills	Sq. Ft.	1.20
Suspended Alum. Strip Ceiling	Sq. Ft.	2.50 - 4.50

IN-PLACE COSTS

PARTITIONS

	<u>U N I T</u>	<u>IN PLACE C O S T S</u>
4" Conc. Block or Clay Tile Painted	Lin.Ft.	\$ 14.50
6" Conc. Block or Clay Tile	Lin.Ft.	16.00
8" Conc. Block or Clay Tile	Lin.Ft.	17.50
Fluted Add	Lin.Ft.	2.00
4" Conc. Block or Clay Tile Plastered and painted	Lin.Ft.	24.90
6" Conc. Block or Clay Tile Plastered and painted	Lin.Ft.	26.40
8" Conc. Block or Clay Tile Plastered and painted	Lin.Ft.	27.70
4" Glazed Block (one side)	Lin.Ft.	22.10
6" Glazed Block (one side)	Lin.Ft.	24.30
8" Glazed Block (one side)	Lin.Ft.	25.50
Polished Marble or Granite on Masonry Back-up	Lin. Ft.	115.00

CERAMIC GLAZED CLAY TILE (18" x 16" Face Size)

4" Thick Glazed (one side)	Lin.Ft.	27.60
4" Thick Glazed (both sides)	Lin.Ft.	35.30
6" Thick Glazed (one side)	Lin.Ft.	34.00
6" Thick Glazed (both sides)	Lin.Ft.	48.80
8" Thick Glazed (one side)	Lin.Ft.	39.70
8" Thick Glazed (both sides)	Lin.Ft.	55.20

NOTE: If Face Size is 5 3/8" increase the rate by 20%

WOOD FRAMED

Hardboard Prefinished	Lin.Ft.	13.80
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IN - PLACE COSTS

PARTITIONS

	<u>U N I T</u>	<u>IN PLACE C O S T S</u>
Low Cost Plywood - Half Glazed	Lin.Ft.	\$ 14.95
Low Cost Plywood - Painted or Prefinished	Lin.Ft.	13.80
Lath & Plaster Painted	Lin.Ft.	19.55
Dry Wall Painted	Lin.Ft.	16.70
Dry Wall Vinyl Coated	Lin.Ft.	21.85
Good Quality Plywood - Half Glazed	Lin.Ft.	29.90
Good Quality Plywood Panels - Rubbed or Prefinished	Lin.Ft.	27.60
Plastic Laminated Panels	Lin.Ft.	39.10
 H.M. STUD FRAMED		
Dry Wall Painted	Lin.Ft.	17.25
Lath & Plaster - Painted	Lin.Ft.	19.55
Good Plywood Panels - Rubbed or Prefinished	Lin.Ft.	27.60
Plastic Laminate Panels	Lin.Ft.	39.10
 MOVABLE TYPE - STEEL MEMBERS		
Solid Panels - Dry Wall - Painted	Lin.Ft.	21.15
Solid Panels - Dry Wall - Vinyl Covered	Lin.Ft.	24.75
Solid Panels - Metal - Painted	Lin.Ft.	28.25
 Half Glass & Half Solid Panels:-		
Dry Wall - Painted	Lin.Ft.	23.00
Dry Wall - Vinyl Covered	Lin.Ft.	29.90
Metal - Painted	Lin.Ft.	30.50
All Glass Panels	Lin.Ft.	31.65

I N - P L A C E C O S T S
PARTITIONS

	<u>U N I T</u>	<u>IN PLACE C O S T S</u>
MOVABLE TYPE - ALUMINUM MEMBERS		
Solid Panels - Drywall - Painted	Lin.Ft.	\$ 20.15
Solid Panels - Drywall - Vinyl Covered	Lin.Ft.	24.75
Solid Panels - Plastic Laminate	Lin.Ft.	46.00
Half Glass & Half Solid Panels		
- Drywall - Painted	Lin.Ft.	21.85
- Drywall - Vinyl Covered	Lin.Ft.	29.90
SOLID PLASTER TYPE	Lin.Ft.	18.40
ALUMINUM FRAMED		
Clear Plate Glass	Lin.Ft.	58.65
Patterned	Lin.Ft.	52.90
Georgian Wire	Lin.Ft.	63.25

BASE YEAR 1969

IN - PLACE COSTS

STAIRS

NOTE: Unit Rate is based on cost per sq. ft. of tread and landing area; and includes various finishes and railings.

METAL STAIRS:-

With one or more of the following items:

Plain metal treads - treads with mastic or concrete or terrazzo fill - precast concrete or terrazzo treads - treads with paint or V.A. tile finish;

Fire proofed with metal lath and plaster or one to two layers of dry Wall

Low quality to select quality railing.

Completely finished	Cost Per Sq. Ft.	\$12.50 - 16.00
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CONCRETE STAIRS:-

With one or more of the following items:

Plain concrete - V.A. tile terrazzo finish - painted or coloured hardener.

Completely finished	Cost Per Sq. Ft.	6.00 - 10.00
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SPIRAL METAL STAIRS:-

4'-6" - 6'-0" dia.	Cost Per Sq. Ft.	60.00 - 100.00
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WOODEN STAIRS:-

Cost Per Sq. Ft.	3.50 - 5.50
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IN-PLACE COSTS

DOORS

Wood Door with Metal Frame and Hardware	Each	\$ 78.00
Plastic Laminated Wood Door including Metal Frame and Hardware	Each	100.00
Wood Door, Hollow Core, Metal Frame and Hardware	Each	55.00
Hollow Metal Slab Door including Metal Frame (Fire Door)	Each	78.00
Hollow Metal Door with Glazed Panel including Metal Frame (Fire Door)	Each	175.00
Lead Lined Door including Metal Frame	Each	250.00
Wood Glazed Screen	Each	4.00 - 5.00
Hollow Metal Glazed Screen	Each	5.50 - 6.50
Aluminum Glazed Screen	Each	10.00

I N - P L A C E C O S T S

PAINTING

Paint Dry Wall	Cost Per Sq. Ft.	\$ 0.11
Paint Plaster Wall	Cost Per Sq. Ft.	0.11
Paint Concrete Wall	Cost Per Sq. Ft.	0.15
Paint Concrete Block Wall	Cost Per Sq. Ft.	0.15
Paint Concrete Floor	Cost Per Sq. Ft.	0.12
Paint Wood Doors	Each	15.00
Paint Metal Doors	Each	15.00
Paint Dry Wall Ceiling	Cost Per Sq. Ft.	0.15
Paint Conc. Ceiling	Cost Per Sq. Ft.	0.18
Vinyl Fabric	Cost Per Sq. Ft.	0.50 - 1.00
Plastic Coating	Cost Per Sq. Ft.	0.28
Wood Natural Finish	Cost Per Sq. Ft.	0.25
Paint Brick Wall	Cost Per Sq. Ft.	0.16
Paint Wood	Cost Per Sq. Ft.	0.15
Acrylic Glazed Coating	Cost Per Sq. Ft.	0.45

IN-PLACE COSTS

PLUMBING

<u>ITEM</u>	<u>INSTALLED COST EACH</u>
Water Closet	\$ 300.00
Lavatory	225.00
Urinal	315.00
Kitchen Sink	255.00
Service Sink	310.00
Drinking Fountain - Standard	210.00
Drinking Fountain - Recessed	275.00
Stall Shower	325.00
Bath without Shower Head	320.00
Bath with Shower Head	380.00
Bidet	320.00

INDUSTRIAL WASH FOUNTAIN

CIRCULAR TYPE

DESCRIPTION	INSTALLED	COST EACH
	36" Dia.	54" Dia.
Precast Stone	\$470.00	\$580.00
Vitreous Enamel	465.00	540.00
Stainless Steel	490.00	620.00

NOTE: For Semi-circular type DEDUCT \$15.00 for each 36" dia. and \$30.00 for each 54" dia. unit.

All the above plumbing rates include some allowance for roughing-in, waste, vent, water supply and fixtures, but do not include the main supply and waste lines and service connections.

I N - P L A C E C O S T S

ELECTRICAL

DESCRIPTION	C O S T		P E R SQ.	F T.
	LOW	AVG.		
Wiring including panelboard but excluding fixtures	.30	.40	.60	.80

The above wiring rates are predicated on Warehouse Structures.
For buildings of different design, adjust rates accordingly.

<u>ELECTRICAL FIXTURES</u>	<u>U N I T</u>	<u>IN PLACE C O S T</u>
Two Tube Fluorescent 48" with Louvres	Each	\$ 35. - 45.
Four Tube Fluorescent 48" with Louvres	Each	50. - 60.
Two Tube Fluorescent 96" with Louvres	Each	80. - 90.
Two Tube Fluorescent 48" Open End	Each	28. - 38.
Three Tube Fluorescent 48" Open End	Each	48. - 58.
Two Tube Fluorescent 96" Open End	Each	52. - 62.
Three Tube Fluorescent 96" Open End	Each	70. - 80.
Single Mercury Vapour Lamp	Each	120. - 140.
Double Mercury Vapour Lamp	Each	160. - 180.





F A R M

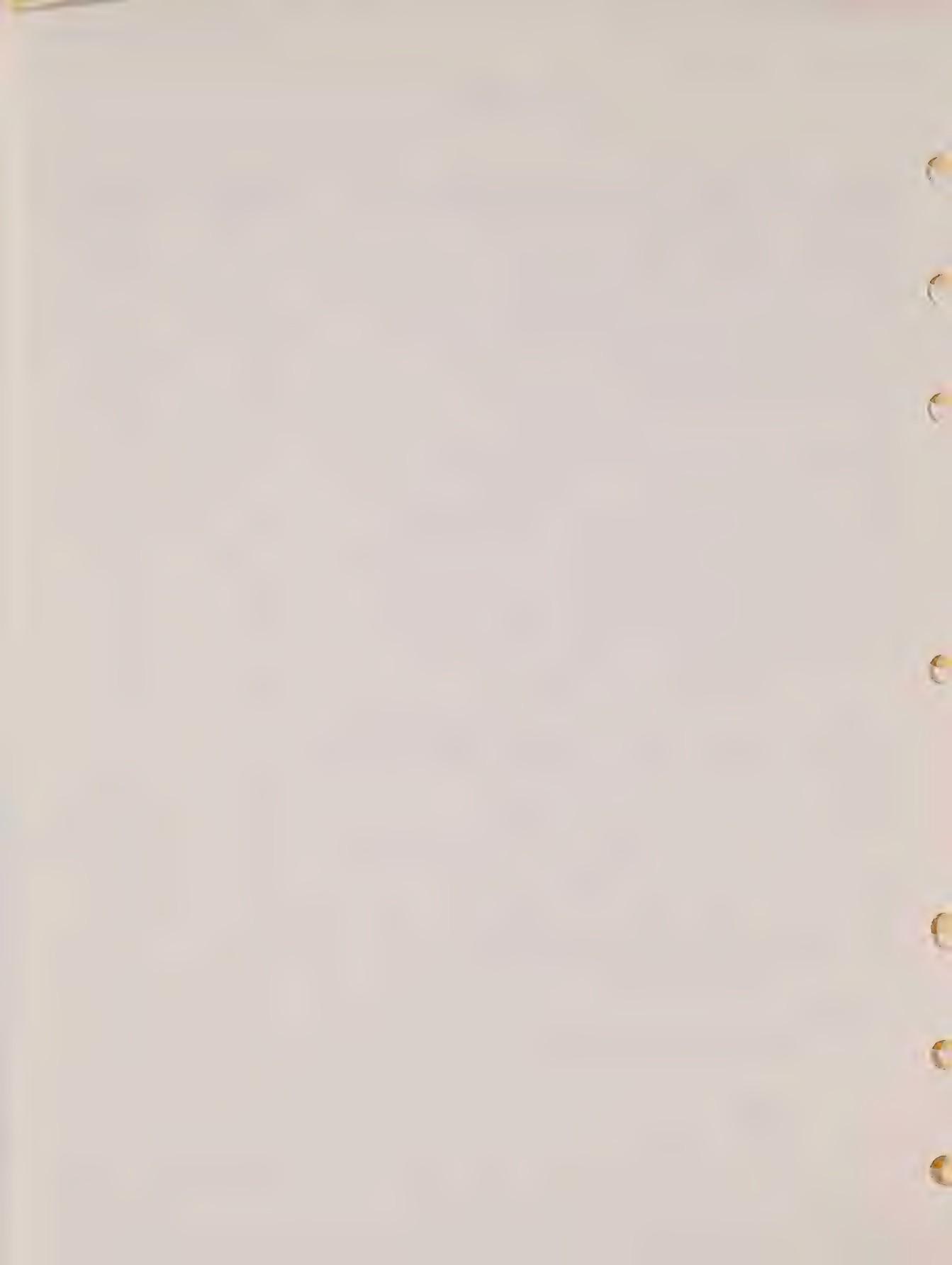
	<u>Page Number</u>	<u>Date Issued</u>
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General Barn Comments and Classifications	1	11/71
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Type I Bank Barn and Type II Stable with Loft - Cost Factors	6	11/71
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Pole Barn - Specifications and Cost Factors	9	11/71
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F A R M

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<u>SECTION 6F - GREENHOUSES - D CONSTRUCTION</u>		
Wood Frame Glass Greenhouses - Specifications and Cost Factors	1	11/71
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<u>SECTION 7F - SILOS, TANKS, GRANARIES AND CORN CRIBS</u>		
Concrete Stave Silos - Cost Factors	1	11/71
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Revised 4/76
Issued 10/75



F A R MSECTION 8F - AVERAGE LIFE TABLE

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- Average Life Tables - General
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SECTION 9F - IN PLACE COSTS

1 - 3	11/71
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SECTION 10F - FARM, MISCELLANEOUS STRUCTURES

Quonset Buildings	1	11/72	Revised #1
Root Houses	2 - 3	9/72	
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Mink Sheds	16	11/75	

Revised 4/1976

Issued 10/75

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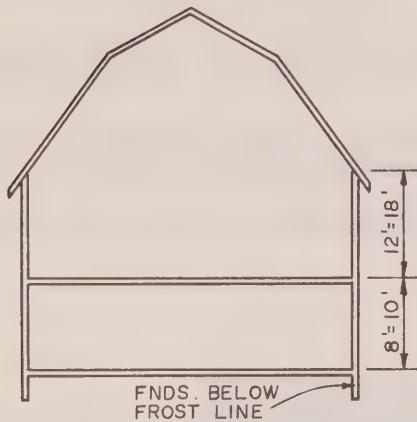


GENERAL BARN COMMENTS

The two-storey bank barn as a type, is prevalent throughout Ontario. Such a structure has multiple uses, but its most predominant use is for housing animals on the ground floor, and feed storage on the second floor.

The basic cost factors for this type of building are predicated on the cost of materials in place; including foundation, walls, flooring, roof framing, roof covering, electrical wiring and incandescent lighting, as well as adequate granary storage on the second floor.

GENERAL BARN CLASSIFICATION

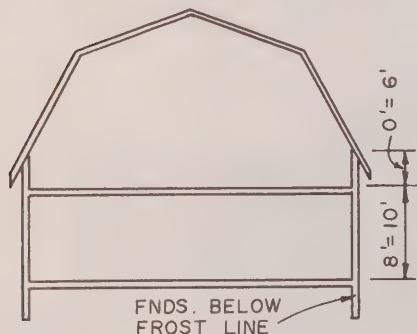


TYPE I BANK BARN

1st Floor Stable - Wall Ht., 8' to 10' (above grade)

2nd Floor Loft - Side Walls 12' to 18'

Roof - Gambrel or Gable



TYPE II STABLE WITH LOFT

1st Floor Stable - Wall Ht. 8' to 10' (above grade)

2nd. Floor Loft - Side Wall 0' to 6'

Roof - Gambrel or Gable



TYPE III FEED BARN

No Stabiling

Side Walls 10' to 18'

Roof - Gambrel or Gable

TYPE I BANK BARN & TYPE II STABLE WITH LOFT

D - 3 SPECIFICATIONS

FOUNDATION & FOOTINGS: Cedar or rough hewn timber posts.

FLOOR STRUCTURE: Stable - earth or planking. Loft - rough hewn timber joists, random spacing with 1" rough lumber flooring & 2" planking over thresh floor area.

EXTERIOR WALL STRUCTURE: 1" Vertical rough lumber on rough hewn timber framing or equiv. with min. blocking & bracing.

ROOF STRUCTURE: Gable roof with min. 2" dia. pole rafters, 1" nailers and galvanized metal roofing or equiv.

DOORS & WINDOWS: Stable - low quality fixed barn sash with min. number of rough lumber doors. Loft - wood swing-out doors of rough lumber.

ELECTRICAL SERVICES: Min. wiring & incandescent fixtures.



TYPE I BANK BARN & TYPE II STABLE WITH LOFT

D-4 SPECIFICATIONS

FOUNDATION & FOOTINGS: Rubble stone or poured con. with field stone embedded.

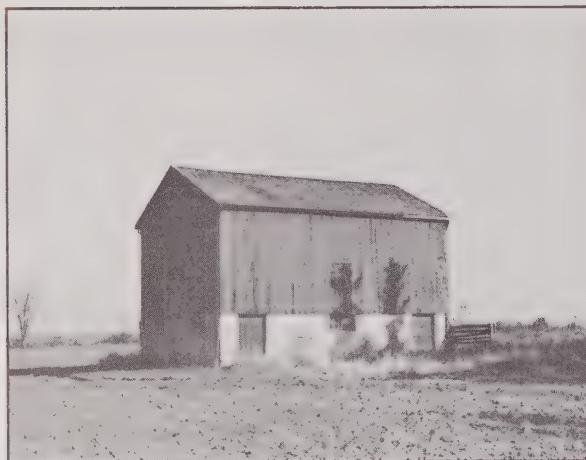
FLOOR STRUCTURE: Stable - earth or planking. Loft - rough hewn timber joists, random spacing with 1" rough lumber flooring & 2" planking over thresh floor area.

EXTERIOR WALL STRUCTURE: 1" vertical siding on rough hewn timber framing with adequate blocking & bracing.

ROOF STRUCTURE: Gable roof with min. 4" dia. Pole rafters, 1" nailers & galv. metal roofing or equiv.

DOORS & WINDOWS: Stable - low quality fixed barn sash with adequate doors of matched lumber. Loft - wood swing-out doors of rough lumber.

ELECTRICAL SERVICES: Min. wiring & incandescent fixtures.



TYPE I BANK BARN 8 TYPE II STABLE WITH LOFT

D - 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. with field stone embedded or, equiv. in con. block.

FLOOR STRUCTURE: Stable - 4" con. slab with min. con. gutters. Loft - 2" x 12" joists @ 12 o.c. or equiv. with 1" T&G flooring & 2" T&G plank over thresh floor area.

EXTERIOR WALL STRUCTURE: 1" Vertical lumber siding or equiv. in galv. metal on column & plank truss system or equiv.

ROOF STRUCTURE: Gambrel roof with truss type rafters, 2" x 6" @ 24" o.c. with 2" nailers & medium gauge galv. metal roofing or equiv.

DOORS & WINDOWS: Stable - Average quality fixed wood or steel barn sash with adequate doors of matched lumber. Loft - wood sliding doors with vert. matched lumber or equiv.

ELECTRICAL SERVICES: Adequate wiring & incandescent fixtures.



TYPE I BANK BARN & TYPE II STABLE WITH LOFT

D - 6 SPECIFICATIONS

FOUNDATION & FOOTINGS: Re. con. or concrete block.

FLOOR STRUCTURE: Stable - 4"-6" re. con. with gutters & feedways. Loft - joists 2" x 12" @ 12" o.c. with 2" T&G over all floor area.

EXTERIOR WALL STRUCTURE: 1" dressed vertical lumber siding or equiv. in galv. metal on column & plank truss system.

ROOF STRUCTURE: Gambrel roofing with truss type rafters 2" x 6" - 2" x 8" @ 24" o.c. with 2" nailers & medium gauge galv. roofing with some fiberglass skylight panels & metal vents or equiv.

DOORS & WINDOWS: Stable - many good quality vented windows with wood or metal sash with adequate wood or metal sliding doors or equiv. Loft - good quality wood sliding doors of T&G lumber or equiv.

ELECTRICAL SERVICES: Heavy duty wiring with incandescent & fluorescent fixtures.



GENERAL BARN COST FACTORS

TYPE I BANK BARN (2-STORY)

CONST. CLASS 'D'

<u>Area Class</u>	1000	2000	3000	4000	5000	6000	8000	10,000
3	3.85	3.55	3.25	3.00	2.80	2.65	2.50	2.45
4	4.30	3.95	3.60	3.35	3.15	2.95	2.75	2.70
5	5.40	4.95	4.55	4.20	3.95	3.70	3.50	3.35
6	6.50	5.95	5.45	5.05	4.75	4.45	4.20	4.05

TYPE II STABLE WITH LOFT

CONST. CLASS 'D'

<u>Area Class</u>	1000	2000	3000	4000	5000	6000	8000	10,000
3	2.85	2.55	2.25	2.00	1.80	1.65	1.50	1.45
4	3.30	2.95	2.60	2.35	2.10	1.90	1.75	1.70
5	4.45	3.95	3.50	3.15	2.80	2.55	2.40	2.25
6	5.15	4.55	4.05	3.65	3.25	2.95	2.75	2.60

TYPE III FEED BARN (NO STABLING)

D-3 SPECIFICATIONS

FOUNDATION & FOOTINGS: Cedar Posts or mud sills on grade.

FLOOR STRUCTURE: Earth floor.

EXTERIOR WALL STRUCTURE: 1" Vertical rough lumber on rough hewn timber framing or equiv. with min. blocking & bracing.

ROOF STRUCTURE: Gable roof with min. 2" dia. pole rafters, 1" nailers & galv. metal roofing or equiv.

DOORS & WINDOWS: Wood swingout doors of rough lumber.

ELECTRICAL SERVICES: None.



" COST FACTORS "

TYPE III FEED BARN

Area Class	1000	2000	3000	4000	5000	6000	8000	10,000
3	2.75	2.30	1.90	1.55	1.30	1.10	0.95	0.85

TYPE III FEED BARN (NO STABLING)

D-4 SPECIFICATIONS

FOUNDATION & FOOTINGS: Cedar posts with poured con. pads.

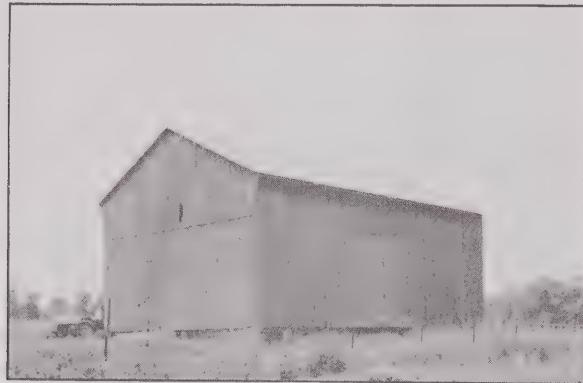
FLOOR STRUCTURE: Rough lumber planking.

EXTERIOR WALL STRUCTURE: 1" Vertical siding or rough hewn timber framing with adequate blocking & bracing.

ROOF STRUCTURE: Gable roof with min. 4" dia. pole rafters, 1" nailers & galv. metal roofing or equiv.

DOORS & WINDOWS: Wood swingout doors of rough lumber.

ELECTRICAL SERVICES: None.



"COST FACTORS"

TYPE III FEED BARN

Area Class \ Class	1000	2000	3000	4000	5000	6000	8000	10,000
4	3.20	2.65	2.20	1.80	1.50	1.25	1.10	1.00

POLE BARN SPECIFICATIONS

CONST. CLASS 'D'

CLASS 5	CLASS 6
<u>FOUNDATIONS & FOOTINGS:</u> Pole const. with con. pads.	Pole const. with con. pads & low perimeter wall.
<u>FLOOR STRUCTURE:</u> Earth.	Earth.
<u>EXTERIOR WALL STRUCTURE:</u> Cedar poles of min. 6" dia. @ 8' o.c. with 2" x 4" girts @ 24" o.c. & galv. metal siding with 2 courses of pressure treated splash boards. One side open.	Pressure treated poles min. 8" dia. @ 8"o.c. with 2" x 4" girts @ 24" o.c. & coloured galv. metal siding with 3 courses of pressure treated T&G splash boards. One side open.
<u>ROOF STRUCTURE:</u> Plank truss roof structure @ 4' o.c., 2" x 4" roof girts @ 24" o.c. & galv. metal roofing or equiv.	Plank truss roof structure @ 4' o.c. with 2" x 4" roof girts supporting coloured galv. metal roofing.
<u>DOORS & WINDOWS:</u> None.	Large sliding metal sheathed doors at each end with fiberglass skylight.
<u>ELECTRICAL SERVICES:</u> None.	None.



"COST FACTORS"

POLE BARN

CONST. CLASS 'D'

Area Class \ Class	1000	2000	3000	4000	5000	6000	8000	10,000
5	1.55	1.45	1.35	1.30	1.25	1.20	1.10	1.05
6	1.75	1.65	1.55	1.50	1.45	1.40	1.35	1.30

NOTE: Base Height 14'-0" to Eave. HT. ADJUSTMENT: For each foot of variation in Ht. adjust unit costs by 1%.

GENERAL BARN
IN-PLACE COSTS

		COST PER SQ. FT. OF FLOOR AREA
FLOORING	3" Con. Floor	\$0.30
	4" Con. Floor	\$0.40
	5" Con. Floor	\$0.50
	2" x 6" plank flooring T & G	\$0.45
	Lam. 2"x4" in lieu of 2"x6" plank add	\$0.20
	Lam. 2"x6" in lieu of 2"x6" plank add	\$0.30
STABLING	Wood partitions and stalls	\$0.50 - \$0.75
	Steel partitions and stanchions	\$1.50 - \$1.75
EXTERIOR WALL CLADDING	Galv. metal wall covering including necessary nailer girts.	\$0.30
	Coloured metal wall covering including necessary nailer girts.	\$0.40
DOORS	Sliding (including hardware)	\$1.45
	Overhead (including hardware)	\$1.85
	Pedestrian 3'x7' (including hardware)	\$45 each
ELECTRICAL	Wiring with incandescent or fluorescent fixtures.	\$0.10 - \$0.25

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MILK HOUSES

SECTION 2F PAGE 1
BASE YEAR 1969

D - 4 SPECIFICATIONS

FOUNDATIONS & FOOTINGS: Poured con. footing & 8" con. blk. foundation wall.

FLOOR STRUCTURE: 3" - 4" Con. slab on grade.

EXTERIOR WALLS: 2" x 4" Wood stud walls @24" o.c. with exterior wd siding or composition insul brick siding on wood sheathing.

ROOF STRUCTURE: 2" x 4" rafters @24" o.c. - open Ceiling. Roof covered with sheathing & composition shingles or equiv. No gutters or downspouts.

DOORS & WINDOWS: 2 - 4 fixed wd barn sash windows with one wd pedestrian door.

ELECTRICAL WIRING: Min. wiring and incandescent fixtures.

D - 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured concrete footing below frost line with 8" conc. blk. foundation wall or equiv.

FLOOR STRUCTURE: 4" Con. slab on compacted fill.

EXTERIOR WALLS: 2" x 4" Wood stud walls @ 16" o.c. with 3" insulation, sheathing and exterior painted wood siding, insul brick or equiv.

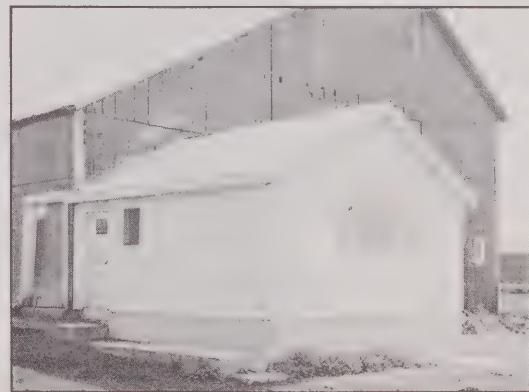
ROOF STRUCTURE: 2" x 4" Rafters @ 24" o.c. with roof sheathing under 28 ga. galv. metal or composition shingles. 2" x 4" Ceiling joists with 4" insulation and plywood or masonite lining. Galvanized metal gutters & downspouts.

DOORS & WINDOWS: 2 - 4 fixed wood sash windows & 2 single pedestrian doors.

ELECTRICAL WIRING: Adequate Wiring and incandescent fixtures.



D - 4



D - 5

MILK HOUSES

D-6 SPECIFICATIONS

FOUNDATION & FOOTINGS: Reinforced concrete footing below frost line. 8" - 10" Reinforced con. foundation wall or equiv.

FLOOR STRUCTURE: 4"-6" Reinforced con. slab with vapour barrier on compacted fill.

EXTERIOR WALLS: 2" x 4" or 2" x 6" Wood stud walls @ 16" o.c., 3" Insulation, $\frac{1}{2}$ " Asph. impregnated building board, vapour barrier & 28 ga. galv. metal siding or equiv.

ROOF STRUCTURE: 2" x 4" rafters @ 16" o.c., roof sheathing, vapour barrier and 28 ga. galv. metal covering or composition shingles. 2" x 4" Ceiling joists, 4" insulation & plywood or masonite lining. Galvanized metal gutters & downspouts with roof ventilator - 1 foot overhang.

DOORS & WINDOWS: 2 - 4 Vented wood sash with storms and screens. 1 Single pedestrian door, a pair swing doors and hose port.

ELECTRICAL WIRING: Heavy duty with incandescent fixtures.



MILK HOUSES

C 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. footing below frost line & 8" con. blk. foundation wall or equiv.

FLOOR STRUCTURE: 4" con. slab on compacted fill.

EXTERIOR WALLS: 8" con. blk. or clay tile - painted.

ROOF STRUCTURE: 2" x 4" Rafters @ 24" o.c. with roof sheathing under 28 ga. galv. metal or composition shingles. 2" x 4" Ceiling joists with 4" insulation & plywood or masonite lining. Galvanized metal gutters & downspouts.

DOORS & WINDOWS: 2 - 4 fixed wood sash windows with one wood pedestrian door.

ELECTRICAL WIRING: Adequate wiring and incandescent fixtures.



MILK HOUSES

C - 6 SPECIFICATIONS

FOUNDATION & FOOTINGS: Reinforced con. footing below frost line.
10" Reinforced con. foundation wall or equiv.

FLOOR STRUCTURE: 4" - 6" Reinforced con. slab with vapour barrier on
compacted fill.

EXTERIOR WALLS: 8" - 10" con. blk. or clay tile - plastered or furred
with asbestos board or equiv. impervious wall finishes.

ROOF STRUCTURE: 2" x 4" Rafters @ 16" o.c. roof sheathing, vapour barrier
and 28 ga. galv. metal covering or composition shingles. 2" x 4" Ceiling
joists, 4" insulation & plywood or masonite lining. Galvanized metal
gutters & downspouts with roof ventilator - 1 foot overhang.

DOORS & WINDOWS: 2 - 4 Vented wood sash with storms & screens. 1 Single
pedestrian door, a pair swing doors & hose port.

ELECTRICAL WIRING: Heavy duty wiring with incandescent fixtures.



MILK HOUSES

COST FACTORS

(BASE HEIGHT 8')

CONST. CLASS 'D'

Area Class \n	100	150	200	250	300	400	500	600
4	5.35	4.75	4.35	4.05	3.85	3.50	3.25	3.10
5	7.70	7.00	6.45	6.05	5.70	5.25	4.95	4.65
6	9.60	8.70	8.00	7.50	7.10	6.55	6.10	5.80

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

COST FACTORS

CONST. CLASS 'C'

Area Class \n	100	150	200	250	300	400	500	600
5	8.40	7.60	7.00	6.55	6.20	5.65	5.30	5.00
6	9.95	9.10	8.40	7.90	7.50	6.95	6.55	6.20

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

MILKING PARLOUR ADDITIVES

These facilities will be of additional cost to the basic shell general bank barns. Due to sanitary code requirements the walls will normally be finished wainscot high -- painted or other similar treatments. Additional lighting requirements, water outlets, ventilation system, doors and windows screened. Pit trench for operation of milking service, concrete curbing, gutter and drains, concrete steps and cow walk ramp-way to milking stalls and plumbing water outlets.

CLASS	COSTS
4	+ \$1.00 to \$1.30 square foot
5	+ \$1.20 to \$1.55 square foot
6	+ \$1.50 to \$1.80 square foot

The above cost factors should be applied against the milking parlour area within a bank barn.

Where a separate milking parlour structure is found, refer to Cost Factors for Milk Houses and apply the above rates as an additive.

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IMPLEMENT SHEDS

SPECIFICATIONS

CONST. CLASS 'D'

CLASS 4	CLASS 5
<u>FOUNDATION & FOOTINGS:</u> Posts or piers.	Posts or piers with con. pads.
<u>FLOOR STRUCTURE:</u> Earth	Earth.
<u>EXTERIOR WALL STRUCTURE:</u> 6" posts 10'-12' o.c. with wooden girts & galv. metal siding or equiv. in wood siding. One side open.	Creosoted poles 8' o.c. with 2" x 4" girts and 30 ga. galv. metal covering or equiv.
<u>ROOF STRUCTURE:</u> Pole roof rafters 4" min. dia. with 1" wood nailers & 30 ga. galv. metal roofing or equiv.	Clear span wood truss with 2" x 6" rafters 4' o.c., 2" x 4" nailers & 28 ga. galv. metal roofing or equiv.
<u>DOORS & WINDOWS:</u> None.	2 sliding doors & 1 ped. door or equiv. Min. no. of windows.
<u>ELECTRICAL SERVICES:</u> None.	None.



CLASS 4



CLASS 5

IMPLEMENT SHEDS

SPECIFICATIONS

CONST. CLASS 'D'

CLASS 6	CLASS 7
<u>FOUNDATIONS & FOOTINGS:</u> Posts or piers with conc. pads or equiv. in trench foundation.	Poured conc. or conc. blk. foundation below frost line or equiv. in pole framing with conc. pads.
<u>FLOOR STRUCTURE:</u> 4" conc. on compacted fill.	5" conc. on compacted fill.
<u>EXTERIOR WALL STRUCTURE:</u> Creosoted poles 8' o.c. with 2" x 4" girts and 28 ga. galv. metal covering or equiv.	2" x 6" Wood stud framing @ 24" o.c. with 28 ga. coloured metal covering or equiv.
<u>ROOF STRUCTURE:</u> Clear span wood truss with 2" x 6" rafters 4' o.c., 2" x 4" nailers and 28 ga. galv. metal roofing or equiv. with some translucent plastic panels.	Clear span wood truss with 2" x 6" rafters @ 32" - 48" o.c., 2" x 4" nailers and 28 ga. coloured metal roofing with translucent plastic panels or equiv.
<u>DOORS & WINDOWS:</u> 2 sliding doors. 1 overhead door or equiv. Adequate windows	3 sliding doors, 1 overhead door & 1 ped. door or equiv. Average no. of windows.
<u>ELECTRICAL SERVICES:</u> Adequate wiring min. no. of outlets.	Adequate wiring with average no. of outlets.



IMPLEMENT SHEDS

COST FACTORS CONST. CLASS 'D'

<u>Area Class</u>	1 000	1 500	2 000	25 00	3 000	4 000	WALL HEIGHT
4	1.70	1.55	1.40	1.30	1.20	1.10	13' - 0"
5	2.60	2.40	2.20	2.05	1.90	1.75	13' - 0"
6	3.30	2.95	2.70	2.50	2.40	2.20	13' - 0"
7	3.80	3.45	3.15	2.95	2.75	2.50	13' - 0"

HEIGHT ADJUSTMENT - 3% for each foot of wall height variation.

NOTE - For structures with con. block exterior bearing walls use "D" class rates.

IN-PLACE COSTS

ITEM	DESCRIPTION	COST PER SQ. FT. OF FLOOR AREA
FLOORING:	3" Con. Floor 4" Con. Floor 5" Con. Floor 3" - 4" Asphalt Floor	\$.30 .40 .50 .25
EXTERIOR WALL CLADDING:	Galv. metal wall covering including necessary nailer girts. Coloured metal wall covering including necessary nailer girts.	.30 .40
DOORS:	Sliding Overhead Pedestrian	\$1.45 \$1.85 \$45 EACH
ELECTRICAL:	Wiring with incandescent or fluorescent fixtures.	COST PER SQ. FT. OF FLOOR AREA \$.05 - .15

POULTRY AND SWINE BUILDINGS

D - 4 SPECIFICATIONS

FOUNDATION & FOOTINGS: Posts or piers.

FLOOR STRUCTURE: Earth.

EXTERIOR WALL STRUCTURE: 1"x8" or 1"x10" rough lumber splash boards at ground level; 1" x 4" wood strapping with 5/8" exterior grade plywood or galvanized metal sheathing forming a 4' Sidewall; remaining side wall open unframed.

ROOF STRUCTURE: 2" x 6" to 2" x 8" rafters with 1" x 4" wood strapping and galvanized metal roofing.

DOORS & WINDOWS: 2 Wood slat sliding doors 8' x 10', one on each end.

ELECTRICAL WIRING: None.



POULTRY AND SWINE BUILDINGS

D - 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: 8" to 10" cedar pole columns embedded in concrete below frost line.

FLOOR STRUCTURE: 4" Con. on compacted fill.

EXTERIOR WALL STRUCTURE: 1" creosote dipped splash boards to a height of 16" to 24". 2" x 4" wood horizontal strapping with 5/8" exterior grade plywood or 28 ga. galvanized metal sheathing. Walls completely enclosed. Insulated with 2" batts; interior of walls $\frac{1}{4}$ " plywood.

ROOF STRUCTURE: 2" x 8" to 2" x 10" rafters, with - 2" x 4" wood strapping under 28 ga. galv. metal. 2" x 4" Ceiling joists, insulated with 2" batts or equiv. and lined.

DOORS & WINDOWS: 2 wood slat sliding doors 8' x 10', one on each end. Fixed windows @ 4' o.c. on side walls or ventilation openings.

ELECTRICAL WIRING: 1 - 25 watt bulb per 200 square foot of floor area.



POULTRY AND SWINE BUILDINGS

D - 6 SPECIFICATIONS

FOUNDATION & FOOTINGS: 8" to 10" cedar (pressure treated) columns embedded in concrete or equiv.

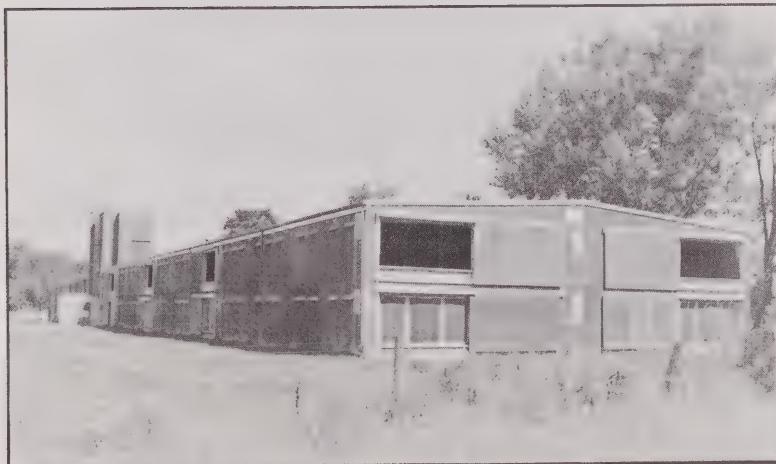
FLOOR STRUCTURE: 4" Con. on compacted fill.

EXTERIOR WALL STRUCTURE: 1" pressure treated splash boards to a height of 24" to 36". 2" x 4" wood horizontal strapping with 5/8" exterior grade plywood or 28 ga. coloured galvanized metal sheathing. Walls completely enclosed. Insulated with 4" batts and vapour barrier. Interior lining $\frac{1}{4}$ " plywood.

ROOF STRUCTURE: Clear span wood truss 4' o.c. with 2" x 4" nailing girts and 28 ga. galvanized metal roofing. 6" insulation over plywood lined ceiling.

DOORS & WINDOWS: 2 Metal covered and insulated sliding doors 8' x 10' or 10' x 10' one on each end. 3' x 7' Pedestrian doors @ 50' o.c. on side walls. 2' x 4' vented windows @ 4' o.c. on side walls or equivalent.

ELECTRICAL WIRING: 1 - 40 watt bulb per 200 square foot of floor space.



POULTRY AND SWINE BUILDINGS

C - 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. footings below frost line; 10" foundation walls.

FLOOR STRUCTURE: 4" Con. on compacted fill.

EXTERIOR WALL STRUCTURE: 8" to 10" Cinder block or Concrete block.

ROOF STRUCTURE: 2" x 6" rafters @ 24" o.c. with 5/8" plywood ceiling and 3" insulation; roof covering 3-4 ply roll roofing tarred. Vapour barrier.

DOORS & WINDOWS: 2 wood sliding doors 8' x 10', one on each end and one pedestrian door.

ELECTRICAL WIRING: 1 - 25 Watt bulb per 200 square feet of floor area.



POULTRY AND SWINE BUILDINGS

C - 6 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. footings below frost line; 10" - 12" foundation wall.

FLOOR STRUCTURE: 4" Con. on compacted fill.

EXTERIOR WALL STRUCTURE: 10" to 12" con. block with adequate masonry pilasters.

ROOF STRUCTURE: 2" x 6" to 2" x 8" rafters @ 16" o.c. Blocked and braced. 5/8" plywood ceiling with 3" batt insulation and roof covering. 5 Ply roll roofing tarred. Vapour barrier.

DOORS & WINDOWS: 2 Metal covered and insulated sliding doors 8' x 10' and one insulated pedestrian door 3' x 7'.

ELECTRICAL WIRING: 1 - 40 Watt bulb per 200 square of floor space.



POULTRY AND SWINE BUILDINGS

COST FACTORS

(BASE HEIGHT 8'-0" SIDE WALLS) CONST. CLASS 'D'

<u>Class</u> <u>Area</u>	1000	2000	4000	6000	8000	10000	12000	16000	20000
4	1.41	1.19	.98	.94	.91	.89	.88	.87	.86
5	3.30	3.10	2.79	2.69	2.64	2.61	2.59	2.56	2.54
6	3.57	3.40	3.11	3.00	2.95	2.92	2.90	2.87	2.85

COST FACTORS

(BASE HEIGHT 8'-0" SIDE WALLS) CONST. CLASS 'C'

<u>Class</u> <u>Area</u>	1000	2000	4000	6000	8000	10000	12000	16000	20000
5	2.80	2.60	2.32	2.28	2.23	2.21	2.19	2.16	2.14
6	3.30	3.10	2.80	2.70	2.66	2.63	2.61	2.58	2.56

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

NOTE - Second storey cost factors may be obtained by applying 65% to first storey rates.

ADDITIVES & DELETIONS

ITEM	DESCRIPTION	COST PER SQ. FT. OF WALL AREA
INTERIOR LINING	3/8" plywood (sheathing type) 1/2" plywood (sheathing type) 5/8" plywood (sheathing type) 3/4" plywood (sheathing type) 1/4" Hardboard 1/4" Aspenite	\$.20 \$.24 \$.28 \$.30 \$.15 \$.16
INSULATION	3" thick 4" thick 6" thick 2" Styrofoam	\$.11 \$.12 \$.15 .30
ITEM	DESCRIPTION	COST PER SQ. FT. OF FLOOR AREA
STABLING	Wood partitions Steel partitions	\$.50 - \$.75 \$1.50 - \$1.75

TOBACCO PACK BARNS

D - 5 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. footings below frost line; 8" con. blk. wall.

FLOOR STRUCTURE: 4" Con. slab on grade.

EXTERIOR WALL STRUCTURE: 2" x 6" Wood stud walls; with plywood sheathing and insul or roll siding or equiv. in galvanized metal.

ROOF STRUCTURE: Gambrel roof with truss type rafters, 2" x 6" @ 24" o.c. with plywood sheathing and rolled roofing or equiv.

DOORS: 2 wood plank sliding doors 10' x 12' and pedestrian door.

D - 6 SPECIFICATIONS

FOUNDATION & FOOTINGS: Poured con. footings below frost line with 10" con. blk. wall.

FLOOR STRUCTURE: 4" Con. slab with 6" re. con. slab in drive-through area.

EXTERIOR WALL STRUCTURE: 2" x 8" wood stud walls; with plywood sheathing and coloured metal covering or equiv.

ROOF STRUCTURE: Gambrel roof with truss type rafters 2" x 8" @ 24" o.c. with plywood sheathing and 210# asphalt shingles or equiv.

DOORS: 2 wood plank sliding doors 12' x 14' and one pedestrian door.



TOBACCO BARNS

STRIPPER BUILDING SPECIFICATIONS

CONST. CLASS 'D'

TYPE 'A'— EXTERIOR STRIPPER BUILDING	
CLASS 5	CLASS 6
<u>FOUNDATION & FOOTINGS:</u> same as shell building.	Same as shell building.
<u>WALL STRUCTURE:</u> 2" x 4" wood stud walls @ 24" o.c. with plywood sheathing and insul or roll siding or equiv. in galvanized metal; 2" insulation with plywood interior lining.	2" x 6" wood stud walls @ 24" o.c. with plywood sheathing & coloured metal covering or equiv; 4" insulation with plywood interior lining.
<u>ROOF STRUCTURE:</u> Gambrel or gable roof with truss type rafters; 2" x 4" @ 24" o.c. with plywood sheathing & rolled roofing or equiv; plywood ceilings with 4" insulation	Gambrel roof with truss type rafters; 2" x 6" @ 24" o.c. with plywood sheathing & 210# asphalt shingles or equiv.; plywood ceilings with 6" insulation.
<u>DOORS & WINDOWS:</u> 2 ped. doors. Fixed wood sash.	2 Ped. doors. Vented barn sash.



TOBACCO BARN S

STRIPPER BUILDING SPECIFICATIONS

CONST. CLASS 'D'

TYPE 'B' - INTERIOR STRIPPER ROOM WITHIN BARN SHELL	
CLASS 5	CLASS 6
<u>FOUNDATION:</u> None, utilizing basic barn shell.	None, utilizing basic barn shell.
<u>INTERIOR WALLS:</u> 2" x 4" wood stud partition with plywood sheathing and 2" insulation & plywood lining.	2" x 6" wood stud partition with plywood sheathing; 4" batt insulation & plywood lining.



TOBACCO BARNS

COST FACTORS

CONST. CLASS 'D'

CLASS	2500	3000	3500	4000	4500	5000	6000	7000	8000
5	3.02	2.88	2.77	2.67	2.58	2.50	2.38	2.27	2.19
6	3.47	3.30	3.17	3.05	2.95	2.87	2.73	2.61	2.52

NOTE: Basic Wall Height 8'-0".

HEIGHT ADJUSTMENT: For each foot of variation in height adjust above unit costs by 3%.

COST FACTORS

TYPE 'A' (EXTERNAL STRIPPER BLDG.)

CONST. CLASS 'D'

CLASS	200	300	400	500	600	700	800	900	1000
5	6.78	6.05	5.57	5.23	4.96	4.75	4.58	4.42	4.29
6	7.88	7.03	6.48	6.08	5.77	5.52	5.32	5.14	4.99

NOTE: Basic Wall Height 8'-0".

COST FACTORS

TYPE 'B' (INTERNAL STRIPPER AREA)

CONST. CLASS 'D'

CLASS	200	300	400	500	600	700	800	900	1000
5	3.29	2.82	2.54	2.33	2.18	2.06	1.95	1.87	1.80
6	3.83	3.28	2.95	2.71	2.53	2.39	2.27	2.17	2.09

NOTE: Basic Wall Height 8'-0".

TOBACCO KILNS

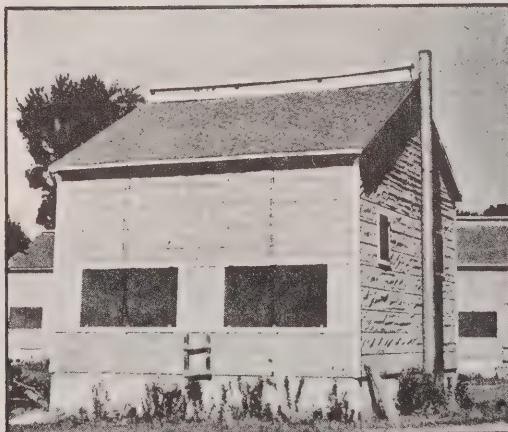
D - 5 SPECIFICATIONS

FOOTINGS AND FOUNDATION WALLS: Poured concrete footings below frost line; 8" concrete or concrete block walls.

STRUCTURAL FRAMING: 2" x 4" wood stud walls @ 24" o.c., stick hangers 2" x 6" @ 48" o.c.; rafters 2" x 4" @ 24" o.c.

EXTERIOR WALL COVERING: Straight edge 1" x 6" wood sheathing or exterior grade plywood with roll roofing.

ROOF COVERING: $\frac{3}{4}$ " sheathing or equivalent exterior grade plywood with utility grade composition shingles.



TOBACCO KILNS

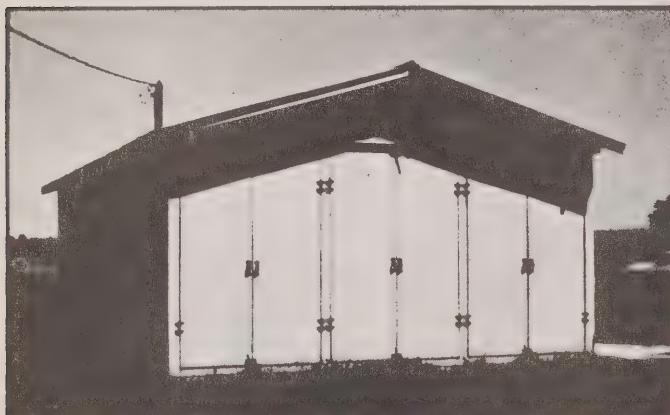
D - 6 SPECIFICATIONS

FOOTINGS AND FOUNDATION WALLS: Poured reinforced concrete footings below frost line; 8" to 10" concrete block walls.

STRUCTURAL FRAMING: 2" x 4" wood stud walls @ 24" o.c., stick hangers 2" x 6" @ 48" o.c.; rafters 2" x 4" @ 24" o.c.

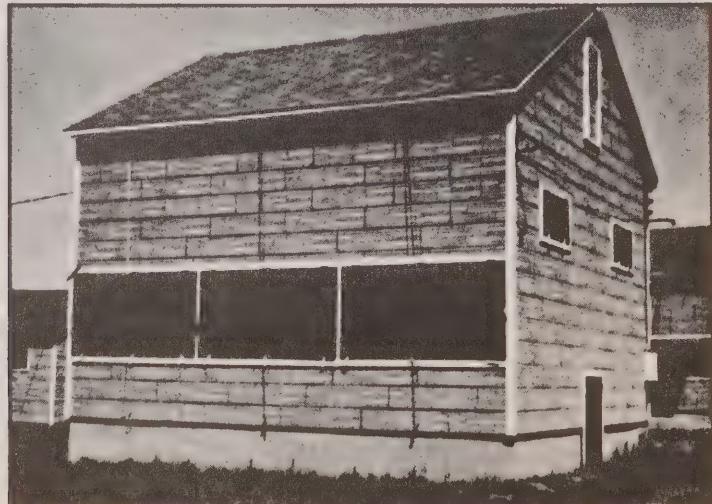
EXTERIOR WALL COVERING: Straight edge 1" x 6" wood sheathing or exterior grade plywood, insul siding or galvanized metal over rigid insulation.

ROOF COVERING: $\frac{3}{4}$ " sheathing or equivalent exterior grade plywood with average grade composition shingles.



← BULK CURING KILN

STANDARD KILN →



TOBACCO KILNS

COST FACTORS

CONST. CLASS 'D'

Area Class \ Class	300	400	500	600	700	800	1000	1200
5	4.25	3.80	3.40	3.15	2.90	2.65	2.30	2.00
6	4.70	4.20	3.80	3.50	3.20	2.95	2.55	2.25

BASIC WALL HEIGHT - 14'-0"

HEIGHT ADJUSTMENT: For each foot of variation in height adjust above unit costs by 3%.

ADDITIVES

ITEM	DESCRIPTION	COST PER SQ. FOOT
HEATING	Normal Heating for Tobacco Kilns.	\$.65 To \$.75
BULK CURING SYSTEMS	Cost factors as determined for tobacco kilns above are applicable to the kilns used in the bulk curing system. Normal heating costs include humidity control.	\$ 4.00

GLASS GREENHOUSES

WOOD FRAME SPECIFICATIONS

CONST. CLASS 'D'

TYPE (IW)	CLASS 4	CLASS 5	CLASS 6
FDN. & FOOTINGS	6" poured conc. fdn. & footings.	6" poured conc. fdn. & footings	6" - 8" poured conc. fdn. & footings.
STRUCTURAL FRAME	Wood	Wood	Wood
END WALLS	Wood veneer ends	Wood veneer ends - 1 glass	2 glass ends
ROOF STRUCTURE	Channelled cedar rafters 12" o.c. painted, with glass.	Channelled cedar rafters 16" o.c. with glass.	Redwood or cedar rafters 20" o.c. painted, with glazed glass.
GUTTERS & SILLS	Cedar or fir	Cedar	Aluminum or steel
VENTILATION	Minimum	Minimum	Staggered vents
HEATING	Nil	Nil	Nil
DOORS	1 door	1 - 2 doors	1 - 2 doors
AVERAGE LIFE	15 years	20 years	20 years

COST FACTORS

Area Class \ Class	1000	1500	2000	2500	3000	3500	4000	6000
4	1.05	1.02	0.99	0.97	0.95	0.93	0.92	0.90
5	1.17	1.13	1.10	1.07	1.05	1.03	1.02	1.00
6	1.33	1.29	1.26	1.23	1.21	1.19	1.17	1.15

GLASS GREENHOUSES

PIPE FRAME OR WELDED PIPE TRUSS SPECS.

CONST. CLASS 'D'

TYPE (IG)	CLASS 3	CLASS 4	CLASS 5	CLASS 6
FDN. & FOOTINGS	6" poured conc. fdn. & footings	6" poured conc. fdn. & footings	6" poured conc. fdn. & footings	6"-8" poured conc. fdn. & footings
STRUCTURAL FRAME	Welded galv. pipe truss frame	Welded galv. pipe truss frame	Welded galv. pipe truss frame	Welded galv. pipe truss frame
END WALLS	Wood veneer ends	Wood veneer ends	1 wood veneer end 1 glass	2 glass ends
ROOF STRUCTURE	Cedar or fir	Cedar 1 58"x3 $\frac{3}{4}$ " spaced for 20" glass.	Redwood rafters spaced for 20" glass.	Alum. or Cypress rafters spaced for 20" glass.
GUTTERS & SILLS	Cedar or fir	Cedar	Aluminum or Steel	Aluminum or steel
VENTILATION	Very little	Staggered vents	Staggered or solid on one side	Solid vents on two sides
HEATING	Stove	Hot water or steam	Hot water or steam.	Hot water or steam.
DOORS	1 door	1 door	1 - 2 doors	1 - 2 doors
AVERAGE LIFE	15 years	20 years	30 years	40 years



COST FACTORS

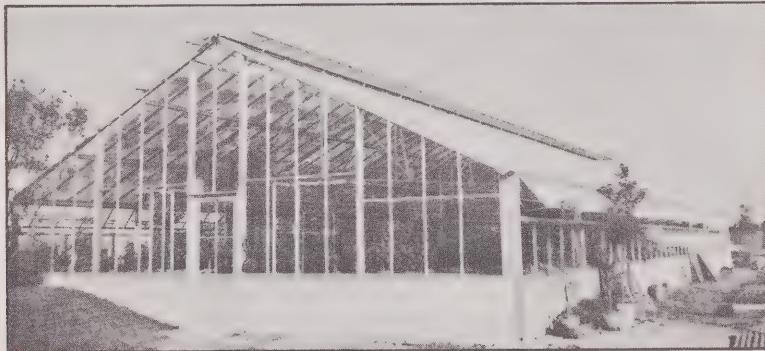
Area Class \ Class	1000	2 000	3 000	4 000	6 000	10,000	20,000	40,000
3	1.45	1.40						
4	1.83	1.78	1.75	1.74	1.73	1.71	1.69	1.67
5	1.94	1.90	1.88	1.86	1.84	1.82	1.80	1.78
6	2.22	2.16	2.13	2.12	2.10	2.06	2.03	2.00

DELETE for lack of heating pipe in Class 4, 5 & 6 - 20 cents per sq. ft.

GLASS GREENHOUSES

ANGLE IRON TRUSS SPECS. CONST. CLASS 'D'

TYPE (2G)	CLASS 4	CLASS 5	CLASS 6
FDN. AND FOOTINGS	6" poured conc. fdn. and footings.	6" poured conc. fdn. and footings.	6" - 8" poured conc. fdn. and footings.
STRUCTURAL FRAME	Galvanized metal angle truss.	Galvanized metal angle truss.	Galvanized metal angle truss.
END WALLS	Wood veneer ends	1 wood veneer end, 1 glass	1 wood veneer end, 1 glass or 2 glass ends
ROOF STRUCTURE	Cedar 1 5/8" x 3 3/4" spaced for 20" glass.	Redwood rafters spaced for 20" glass.	Aluminum or Cypress rafters spaced for 20" glass.
GUTTERS AND SILLS	Cedar	Aluminum	Aluminum
VENTILATION	Staggered vents	Staggered or solid on one side	Solid on both sides
HEATING	Adequate hot water or steam pipes	Adequate hot water or steam pipes	Adequate hot water or steam pipes
DOORS	1 pedestrian door	1 - 2 pedestrian doors	1 - 2 pedestrian doors
AVERAGE LIFE	20 years	30 years	40 years



COST FACTORS

Area Class \ Class	1 000	2 000	3 000	4 000	6 000	10 000	20 000	40 000
4	1.94	1.91	1.89	1.86	1.84	1.82	1.80	1.78
5	2.05	2.02	2.00	1.98	1.95	1.93	1.91	1.89
6	2.44	2.40	2.36	2.34	2.32	2.29	2.25	2.22

DELETE for lack of heating pipe - 20 cents per sq. ft.

ISSUED 11/1971

PLASTIC GREENHOUSES

COST FACTORS

TYPE	AVERAGE LIFE	DESCRIPTION	COST PER SQ. FOOT
(1P)	5 years	Plastic on light wood post construction	30¢ - 35¢
(2P)	10 years	Plastic on wood frame treated 4"x4" cedar posts.	35¢ - 45¢
(3P)	20 years	Plastic on metal pipe arch or quonset frame.	50¢ - 70¢
(4P)	20 years	Double layer plastic on metal pipe arch.	75¢ - \$1.00

CONSERVATORY GREENHOUSE

DESCRIPTION	INSTALLED COST PER SQ. FOOT
Institutional Type Greenhouse	\$4.50 - \$8.50

ALUMINUM GREENHOUSE

DESCRIPTION	INSTALLED COST PER SQ. FOOT
Small Aluminum Greenhouse	\$3.50 - \$5.50

ADDITIVES TO ALL GREENHOUSES

ITEM	DESCRIPTION	COST PER SQ. FOOT
HEATING	Coal Fired Boiler	10¢ - 15¢
	Automatic Bunker Oil Boiler	15¢ - 25¢
	Automatic Gas Boiler	15¢ - 25¢
CHIMNEY	Brick Type - \$85-110 per lin. ft. of height. Steel Stack Type (See Section 1C Additives)	

FARM SILOS

CONCRETE STAVE SILO - COST FACTORS

Ht. Dia.	20'	25'	30'	35'	40'	45'	50'	55'	60'	70'	80'
10'	920	1100	1280	1465	1650						
11'	995	1195	1390	1580	1780	1970	2165				
12'	1075	1285	1495	1705	1895	2125	2335				
13'	1170	1395	1620	1850	2075	2300	2525				
14'	1265	1510	1750	1990	2235	2475	2715				
16'		1755	2035	2315	2600	2880	3160	3440	3725		
18'			2355	2685	3010	3335	3660	3985	4315		
20'			2690	3055	3420	3785	4155	4620	4890	5610	6340
24'					4260	4715	5165	5615	6070	6980	7885
30'									8100	9510	10980

NOTE: Cost Factors include foundation, silo chute and ladder.

DEDUCT for lack of - chute \$4.50 - \$5.50 per vertical foot.



ADDITIVE - SILO DOMES

Dia. Roof	10'	11'	12'	13'	14'	16'	18'	20'	24'	30'
ALUMINIZED	250	280	310	330	350	460	580	750	1150	2110
GALVANIZED	200	230	260	285	310	370	420	480	950	1850

NOTE: The above cost factors are DOLLAR values based on Height and Dia. measurements.

FARM SILOS

POURED CONCRETE SILO - COST FACTORS

Ht. Dia.	20'	25'	30'	35'	40'	45'	50'	55'	60'	70'	80'
10'	930	1125	1315	1500	1685						
11'	1015	1220	1425	1625	1825	2030	2230				
12'	1095	1315	1530	1745	1960	2180	2395				
13'	1190	1430	1660	1895	2125	2360	2590				
14'	1285	1540	1790	2040	2285	2535	2785				
16'		1790	2080	2370	2660	2950	3235	3525	3815		
18'			2410	2745	3080	3415	3750	4085	4420		
20'			2750	3130	3505	3880	4255	4630	5005	5755	
24'					4400	4870	5335	5805	6275	7210	8150
30'									8460	9930	11800

NOTE: Cost Factors include foundation, silo chute & ladder.

DEDUCT for lack of - chute \$4.50 - \$5.50 per vertical foot.

ADDITIVE - SILO DOMES

Roof Dia.	10'	11'	12'	13'	14'	16'	18'	20'	24'	30'
ALUMINIZED	250	280	310	330	350	460	580	750	1150	2110
GALVANIZED	200	230	260	285	310	370	420	480	950	1850

NOTE: The above cost factors are DOLLAR values based on Height and Dia. measurements.

FARM SILOS

WOOD SILOSCONC. SILO ADDITIVE

When a poured concrete silo's inner surface is epoxy coated or sealed with a resin compound for storage of high moisture silage. Add .20¢ per sq. ft. to the cost of the interior wall and roof area. The rate for the silo structure will be costed from section 7F, Page 2.

WOOD SILOS

To arrive at Cost Factors for Wood Silos up to 30' in height and 16' in diameter, deduct 8 to 10% from stave silos cost factors. For wood silos exceeding the dimensions above, add 10 - 12% to the stave silo cost factors.

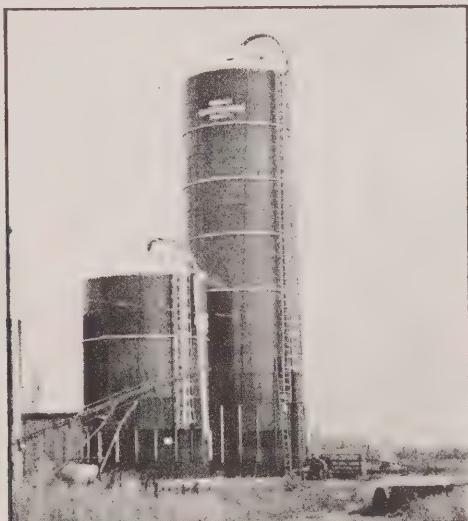
SEALED STEEL TANK SILO - COST FACTORS

(HARVESTORE TYPE)

Ht. Dia.	22'	25'	30'	40'	50'	60'	65'	70'	78'	80'
20'	7300	8100	9300	12300	14400	16700	17400	18100		
25'							28000	29200	30900	31300

NOTE: Cost Factors include foundation costs, but do not include equipment costs.

The above cost factors are DOLLAR values based on Height and Dia. measurements.



FARM SILOS

WOOD SILOS

To arrive at Cost Factors for Wood Silos up to 30' in height and 16' in diameter, deduct 8 to 10% from stave silos cost factors. For wood silos exceeding the dimensions above, add 10 - 12% to the stave silo cost factors.

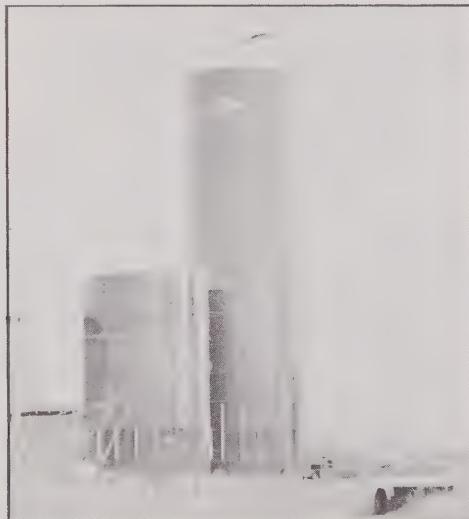


SEALED STEEL TANK SILO - COST FACTORS
(HARVESTORE TYPE)

Ht. Dia.	22'	25'	30'	40'	50'	60'	65'	70'	78'	80'
20'	7300	8100	9300	12300	14400	16700	17400	18100		
25'							28000	29200	30900	31300

NOTE: Cost Factors include foundation costs, but do not include equipment costs.

The above cost factors are DOLLAR values based on Height and Dia. measurements.



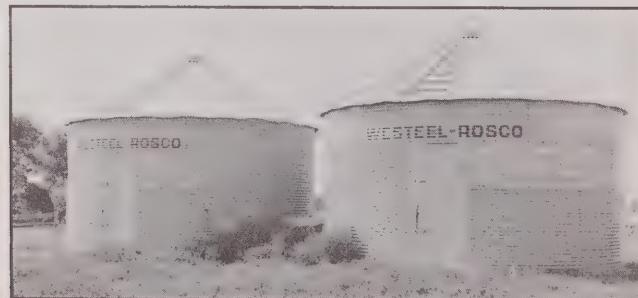
METAL GRANARIES

COST FACTORS

DIAMETER IN FEET	OVERALL HT. IN FEET	CAPACITY IN BUSHELS	COST IN DOLLARS
14'	7' - 6"	625	\$ 440
14	9' - 3"	895	510
14	10' - 0"	965	530
14	14' - 3"	1350	625
14	16' - 9"	1650	670
15	11' - 6"	1250	620
15	15' - 2"	1750	770
18	16' - 0"	2600	975
18	19' - 8"	3350	1170
18	23' - 4"	4100	1325
19	15' - 9"	2700	980
19	18' - 3"	3300	1110
19	20' - 9"	3850	1275
19	25' - 9"	5000	1660
21	20' - 7"	4650	1640
21	24' - 3"	5700	1890
25	22' - 7"	7000	2180
25	25' - 1"	8000	2400
25	27' - 7"	9000	2640
25	30' - 1"	10000	3000
27	25' - 1"	9900	2985

NOTE: The above cost factors include the costs of erection, flooring and foundation.

NOT INCLUDED: Equipment.

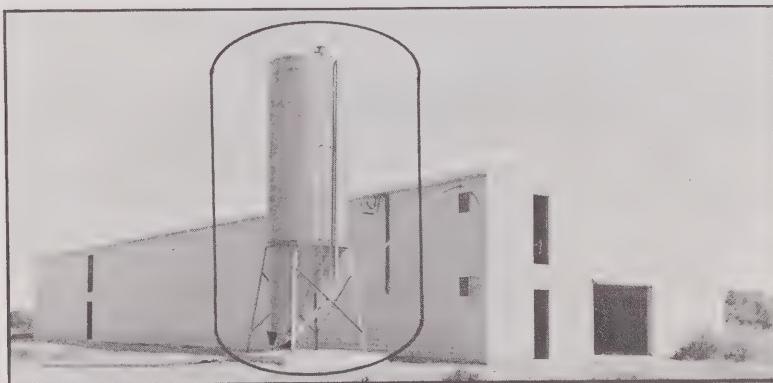


BULK METAL STORAGE TANKS

COST FACTORS

HOPPER TYPE

DIAMETER IN FEET	OVERALL HT. IN FEET	CAPACITY IN TONS	COST IN DOLLARS
6'	10' - 4"	2.9	\$ 335
6	13' - 0"	4.4	370
6	15' - 8"	5.9	410
6	18' - 4"	7.4	440
6	21' - 0"	8.9	520
6	23' - 8"	10.4	560
9	16' - 7"	11.4	750
9	19' - 3"	14.7	785
9	21' - 11"	18.1	850
9	24' - 7"	21.5	920
9	27' - 3"	24.8	1005
9	29' - 11"	28.2	1195
9	32' - 7"	31.5	1295
9	35' - 3"	34.9	1385



NOTE: the cost factors include the costs of erection, flooring and conc. fdns.

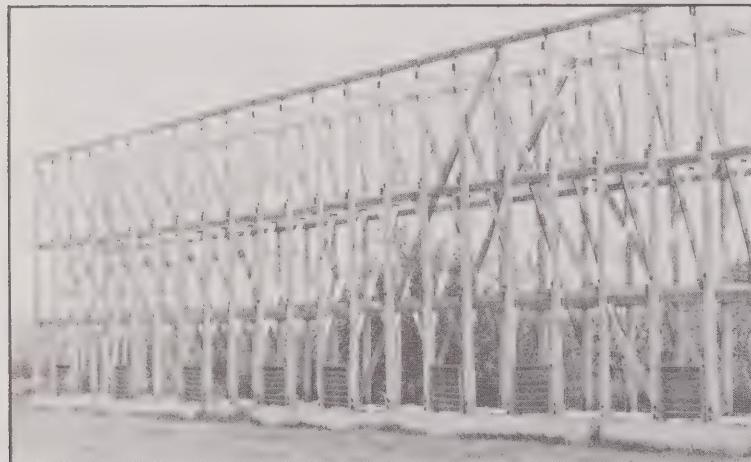
NOT INCLUDED: All costs of ladders, augers or equipment.

CORN CRIBS

SPECIFICATIONS & COSTS (BASE HEIGHT 16')

TYPE	DESCRIPTION	COST PER SQ. FOOT
A	Reinf. con. slab on grade with wood poles at 3'-4" o.c. and adequate bracing. Exterior enclosure of 2" x 2" galv. wire.	\$3.40
B	Reinf. conc. slab on grade with wood poles @ 3'-4" o.c. & adequate bracing. Exterior enclosure of 1"x4" spaced wood siding.	\$3.55

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.



TYPE 'A'

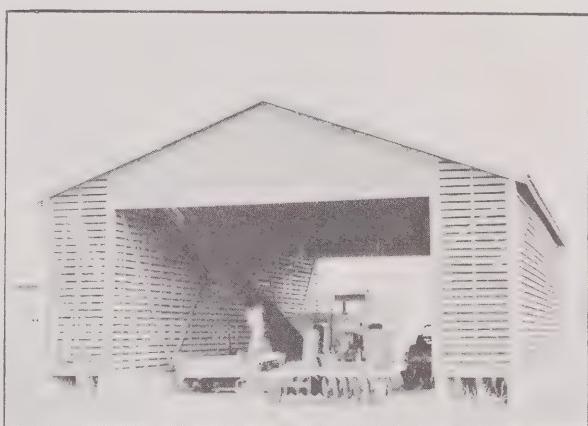
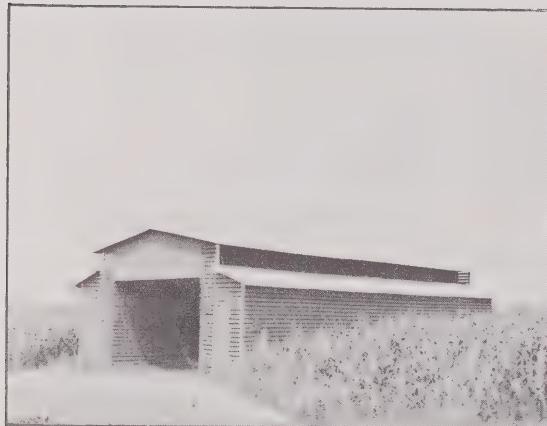
TYPE 'B' 



CORN CRIBS

DRIVE - THROUGH CORN CRIB · SPECIFICATIONS

Wood frame structure with conc. foundation walls. Wood framing of 2" x 4" studs @ 24" o.c., 1" x 4" spaced wood siding and 2" x 4" rafters. The roof is covered with plywood sheathing, roll roofing or equiv.


DRIVE - THROUGH CORN CRIB COST FACTORS
 (BASIC HEIGHT AT EAVE 12')

AREA	500	600	700	800	900	1000	1200	14 00	16 00	18 00	2 000
RATE PER SQ. FOOT	2.32	2.19	2.08	2.00	1.92	1.86	1.75	1.67	1.60	1.54	1.49

HEIGHT ADJUSTMENT: 3% for each foot of wall height variation.

ADDITIVES & DELETIONS

ITEM	DESCRIPTION	C O S T S
ROOFING	Galvanized metal, sheathing & 2" x 4" rafters	= \$.65/sq.ft. of Fl. area
FLOORING	4" Poured Concrete 5" Poured Concrete	= \$.40/sq.ft. = \$.50/sq. ft.



SILOS

BUNKER TYPE

Concrete buttress or wood post type of silos above ground. Walls are conc. panels held by conc. buttress, having footings on gradeline, or the equivalent in treated wood posts and sheathing. Floors are reinf. conc. slab on grade. Both end walls open to allow access of machinery. The rate for end wall see additives below.

CONCRETE AND WOOD SILO RATES
(ON GRADE)

COST PER LIN. FT. OF SILO LENGTH (BASE WIDTH 32')				
HEIGHT	8'	10'	12'	14'
COST	43.00	49.00	55.00	61.00

Add \$1.60 per sq. ft. of end wall(s) enclosed.

Add \$4.30 for every 10' of additional width.

AVERAGE LIFE 25 YEARS

TRENCH TYPE

The trench silos are below grade, having concrete walls placed on conc. floor slab, and held in place by means of dead man anchors, or the equivalent in treated wood walls. This silo is often built on the side of a hill having one open end for drainage and access. Add or deduct for variation of enclosing end wall.

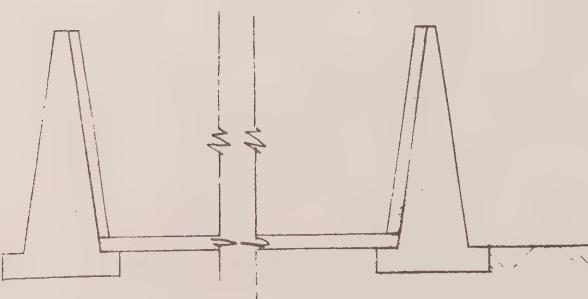
TRENCH SILO
(BELOW GRADE)

COST PER LIN. FT. OF SILO LENGTH (BASE WIDTH 32')				
HEIGHT	10'	12'	14'	16'
COST	56.00	62.00	69.00	76.00

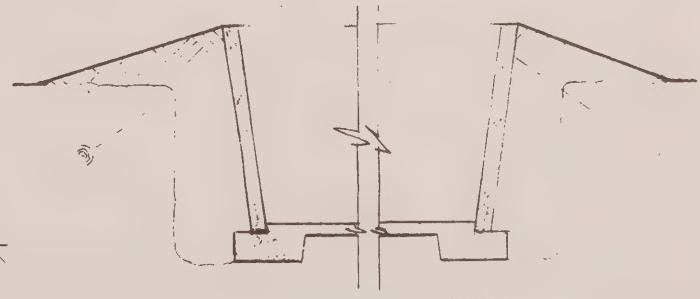
Add \$1.60 per sq. ft. of end wall(s) enclosed.

Add \$7.70 for every 10' of additional width.

AVERAGE LIFE 30 YEARS



CONC. BUNKER SILO



CONC. TRENCH SILO







FARM BUILDINGS

AVERAGE LIFE TABLES

DESIGN OF IMPROVEMENTS	AVERAGE LIFE IN YEARS			
	QUALITY CLASS			
	3	4	5	6 or over
Barn, Type I (Bank Barn)	30	40	50	60
Barn, Type II (Stable with Loft)	30	40	50	60
Barn, Type III (Feed Barn)	30	40		
Barn, Pole Type			25	30
Milk House, Class "D"		25	30	35
Milk House, Class "C"			35	40
Implement Sheds Class "D"		25	30	35
Poultry Bldgs. Class "D"		25	30	35
Poultry Bldgs. Class "C"			30	35
Tobacco Pack Barns			50	60
Tobacco Kilns			30	35
Greenhouses (Wood Frame)		15	20	20
Greenhouses (Pipe Frame)	15	20	30	40
Greenhouses (Angle Iron Truss)		20	30	40

AVERAGE LIFE TABLES (FOR STRUCTURES WITH NO QUALITY CLASS)

DESIGN OF IMPROVEMENTS	AVERAGE LIFE IN YEARS
Greenhouses (Plastic Type 1P)	5
Greenhouses (Plastic Type 2P)	10
Greenhouses (Plastic Type 3P)	20
Greenhouses (Plastic Type 4P)	20
Silos (Concrete Stave)	25
Silos (Poured Concrete)	35
Silos (Wood)	20
Silos (Sealed Steel Tank)	35
Granaries ,	25
Bulk Metal Storage Tanks	25
Corn Cribs Type A	20
Corn Cribs Type B	25
Corn Cribs (Drive-Through)	25

NOTE: When a half classification is used (e.g. 5.5) raise to the next higher classification (e.g. 6) for selection of average.

NORMAL PERCENT GOOD TABLES (FARM BUILDINGS)

AVERAGE LIFE TABLES - NORMAL PERCENT GOOD TABLES

The Appraisal Notes for the Assessor outlines the recommended procedure to be followed in developing tables similar to the ones presented in this Section.

It is to be particularly noted, however, that the Percent Good Tables in the Handbook are simply illustrations of how such tables should appear and do not reflect rates of depreciation in any specific area in Ontario. The Department does not recommend that they be used as actual tables until they have been substantiated from market data.

GENERAL REMARKS:

- 1) Average Life equals Economic Life.
- 2) Average Life assumes normal maintenance of a structure but no functional obsolescence due to poor design.
- 3) Percent Good is the complement of depreciation --- e.g. depreciation of 60% equals a percent good of 40%.
- 4) Normal Percent Good Tables are designed to measure normal functional obsolescence and normal physical depreciation.

NORMAL PERCENT GOOD TABLES
(FARM BUILDINGS)

35 Years Average Life			40 Years Average Life			50 Years Average Life			60 Years Average Life		
EFF. AGE	% GOOD	R.E.L.	EFF. AGE	% GOOD	R.E.L.	EFF. AGE	% GOOD	R.E.L.	EFF. AGE	% GOOD	R.E.L.
1	98	34	1	98	39	1	98	49	1	99	59
2	95	33	2	96	38	2	97	48	2	97	58
3	93	32	3	94	37	3	95	47	4	95	56
4	91	31	4	92	36	4	93	46	5	93	55
5	88	30	5	90	35	5	92	45	6	92	54
6	86	29	6	88	34	6	90	44	7	90	53
7	84	28	7	86	33	7	89	43	9	88	51
8	81	27	8	84	32	9	85	41	10	86	50
9	79	26	9	82	31	10	84	40	12	84	48
10	77	25	10	80	30	11	82	39	13	82	47
11	74	24	11	77	29	12	80	38	15	80	45
12	72	23	12	75	28	13	79	37	16	78	44
13	69	22	13	73	27	14	77	36	18	76	42
14	67	21	14	71	26	15	76	35	19	74	41
15	65	20	15	69	25	17	72	33	20	73	40
16	62	19	16	67	24	18	71	32	21	71	39
17	60	18	17	65	23	20	67	30	23	69	37
18	58	17	18	63	22	21	66	29	24	67	36
19	55	16	19	61	21	22	64	28	26	65	34
20	53	15	20	59	20	23	63	27	27	63	33
21	51	14	21	57	19	25	59	25	29	61	31
22	48	13	22	55	18	26	58	24	30	59	30
23	46	12	23	53	17	27	56	23	31	58	29
24	44	11	24	51	16	28	54	22	32	56	28
25	41	10	25	49	15	29	53	21	34	54	26
26	39	9	26	47	14	31	49	19	35	52	25
27	37	8	27	45	13	32	48	18	37	50	23
28	34	7	28	43	12	33	46	17	38	48	22
29	32	6	29	41	11	34	45	16	40	46	20
30	30	5	30	39	10	36	41	14	41	44	19
31	27	4	31	36	9	37	40	13	43	42	17
32	25	3	32	34	8	39	36	11	44	40	16
33	22	2	33	32	7	40	35	10	46	37	14
34	20	1	34	30	6	41	33	9	48	35	12
			35	28	5	42	32	8	51	31	9
			36	26	4	44	28	6	52	29	8
			37	24	3	45	27	5	54	27	6
			38	22	2	47	23	3	55	25	5
			39	20	1	48	22	2	57	22	3
						49	20	1	59	20	1



FARM

IN-PLACE COSTS

FLOOR FRAMING

DESCRIPTION	COST PER SQUARE FOOT
Floor Joists 2"x4" @ 16" o.c.	\$0.20
Floor Joists 2"x6" @ 16" o.c.	\$0.31
Floor Joists 2"x8" @ 16" o.c.	\$0.38
Floor Joists 2"x10" @ 16" o.c.	\$0.44
Floor Joists 2"x12" @ 16" o.c.	\$0.53
Planking 2" x 6"	\$0.45
Laminated 2" x 4" in lieu of 2" x 6" plank - <u>add</u>	\$0.20
Laminated 2" x 6" in lieu of 2" x 6" plank - <u>add</u>	\$0.30

FLOORING

DESCRIPTION	COST PER SQUARE FOOT
3" Concrete floor	\$0.30
4" Concrete floor	\$0.40
5" Concrete floor	\$0.50
3"-4" Asphalt floor	\$0.25

WALL FRAMING

DESCRIPTION	COST PER SQUARE FOOT
Wood Stud Partition 2" x 4" @ 16" o.c.	\$0.21
Wood Stud Partition 2" x 6" @ 16" o.c.	\$0.32
Wood Stud Partition 2" x 8" @ 16" o.c.	\$0.42
Wood Stud Partition 2" x 4" @ 24" o.c.	\$0.18
Wood Stud Partition 2" x 6" @ 24" o.c.	\$0.27
Wood Stud Partition 2" x 8" @ 24" o.c.	\$0.34

EXTERIOR WALL CLADDING

DESCRIPTION	COST PER SQUARE FOOT
Galv. metal wall covering including necessary nailer girts	\$0.30
Coloured metal wall covering including necessary nailer girts.	\$0.40

FARM

IN-PLACE COSTS

INTERIOR LINING

DESCRIPTION	COST PER SQUARE FOOT
1/4" plywood (Sheathing Type)	\$0.18
3/8" plywood (Sheathing Type)	\$0.20
1/2" plywood (Sheathing Type)	\$0.24
5/8" plywood (Sheathing Type)	\$0.28
3/4" plywood (Sheathing Type)	\$0.30
1/4" hardboard	\$0.15
1/4" aspenite	\$0.16

INSULATION

DESCRIPTION	COST PER SQUARE FOOT
3" thick	\$0.11
4" thick	\$0.12
1" Styrofoam	\$0.15

ROOF FRAMING

DESCRIPTION	COST PER SQUARE FOOT
Rafters 2" x 4" @ 16" o.c.	\$0.18
Rafters 2" x 4" @ 24" o.c.	\$0.16
Roof Trusses	\$0.35 - \$0.55

ROOF COVERING

DESCRIPTION	COST PER SQUARE FOOT
Wood Sheathing 1" x 8"	\$0.20 - \$0.25
Asphalt Shingles 210#/	\$0.22 - \$0.25
Cedar Shingles 5" Exp.	\$0.55 - \$0.60
Galvanized metal	\$0.24
Coloured metal	\$0.34

ELECTRICAL WIRING

DESCRIPTION	COST PER SQ. FT. OF FLOOR AREA
Wiring with incandescent or fluorescent fixtures.	\$0.05 - \$0.25

FARM

IN-PLACE COSTS

DOORS

DESCRIPTION	COST PER SQ FOOT OF DOOR AREA
Sliding	\$1.45 per sq. ft.
Overhead	\$1.85 per sq. ft.
Pedestrian	\$45. each

MILKING PARLOUR STALLS

DESCRIPTION	COST PER STALL
Single Gate Type	\$250 - \$325
Walk Through Type	\$135 - \$200
Herringbone Type	\$175 - \$200

INCLUDES: Installation, stall and necessary appurtenances.

STANCHIONS AND TIE-UPS

DESCRIPTION	COST PER STALL
Four Point Cross Chain Tie	\$30 - \$45
Arch Type Cow Stall	\$30 - \$45
Stanchion	\$30 - \$45
Comfort Stall	\$65 - \$90

INCLUDES: Installation, manger, dividers head rails, tie-up or stanchion.

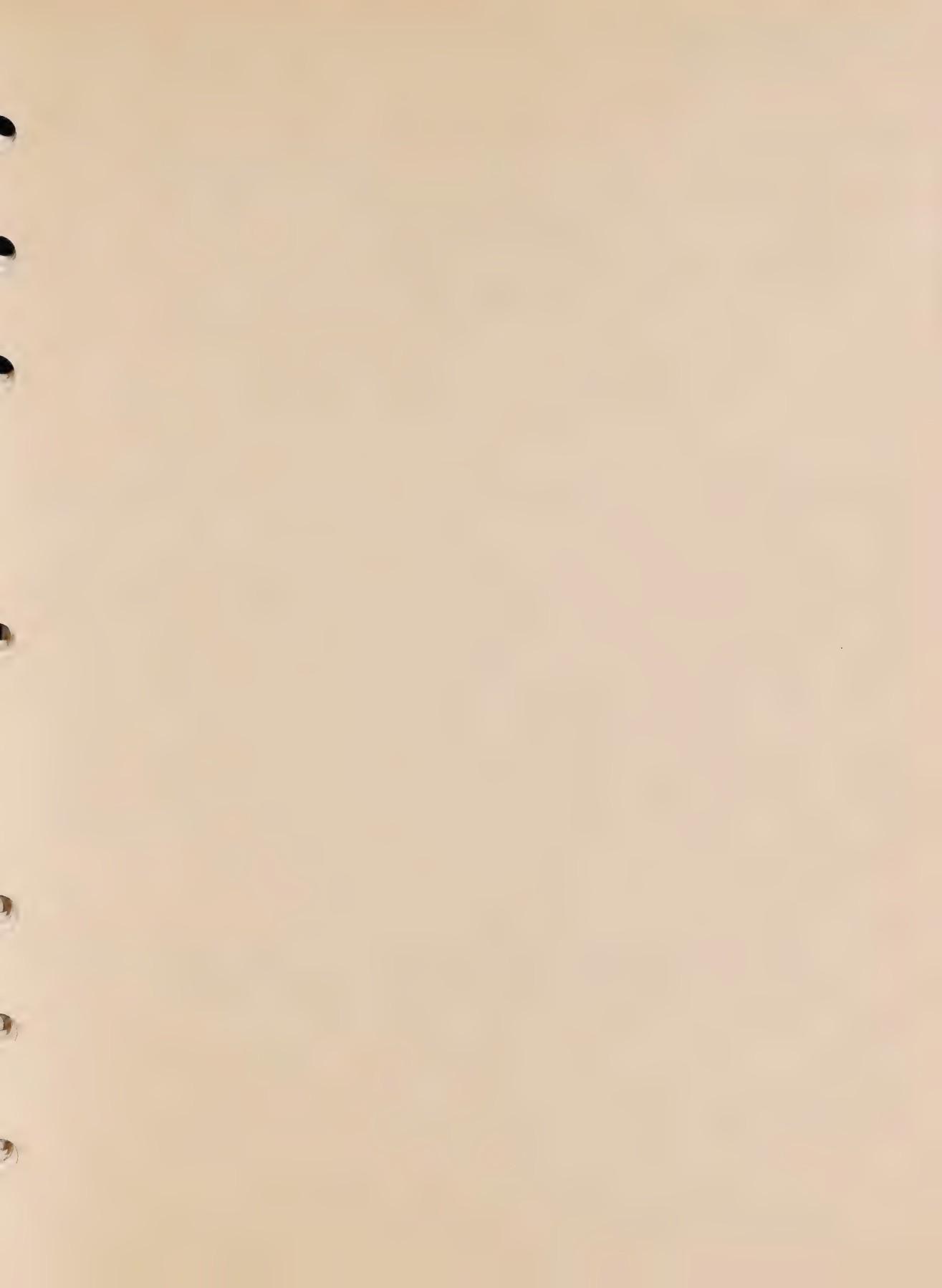
STEEL PARTITIONS

DESCRIPTION	PER LINEAR FOOT	
	PAINTED	GALVANIZED
Bull Pen Panels up to 5'0" from floor	\$11.50	\$14.00
Cow Pen Panels up to 4'6" from floor	\$ 9.80	\$11.75
Calf Pen Panels up to 4'0" from floor	\$11.00	\$12.60
Hog Pen Panels up to 4'0" from floor	\$14.50	\$17.00

INCLUDES: Necessary panels, reinf. steel embedded in conc. installed.

STABLING

DESCRIPTION	COST PER SQ. FOOT OF FLOOR AREA
Wood partition & stalls	\$0.50 - \$0.75
Steel partitions & stanchions	\$1.50 - \$1.75



QUONSET BUILDINGS

COST FACTORS

CONST. CLASS 'D'

Length Width	30'	40'	50'	60'	80'	100'	120'	Height
30'	.2.10	1.95	1.85	1.75	1.70	1.70	1.65	15'
40'		2.00	1.95	1.85	1.75	1.75	1.70	18'
50'			2.00	1.95	1.90	1.85	1.75	18'
60'				2.10	2.00	1.95	1.95	20'
70'					2.20	2.15	2.10	24'
80'						2.20	2.10	21'

NOTE:

The above cost factors include the costs of the basic shell structure erected on a low concrete foundation and end walls, each with a pedestrian door and two windows. Cost factors do not include the cost of flooring or electric wiring. For cost of additives, use in-place cost section.

Average Life: 30 years.

ROOT HOUSESGENERAL SPECIFICATIONS

TYPE I. Concrete pads foundation. Earth floor. Wood frame. Low pitched gable or shed type roof. Wall cladding is either lumber or metal. Roof is insulated and covered with metal sheathing. Double swing doors. Incandescent lighting.

TYPE II. Concrete or masonry foundation. Concrete floor. Wood frame. Low pitched gable or shed type roof. Walls and roof consist of sheathing, insulation and metal cladding. Double swing doors. Incandescent lighting.

COST FACTORS

(Base Height 12')

AREA	2000	3000	4000	5000	6000	7000	8000	10000	12000
TYPE I	\$3.00	2.65	2.45	2.30	2.20	2.10	2.05	2.00	1.95
TYPE II	\$3.95	3.50	3.25	3.05	2.90	2.80	2.75	2.65	2.60

Ht. Adjustment 3% for each foot of wall height variation

AVERAGE LIFE: Type I = 20 years

Type II = 25 years

Use standard depreciation tables for appropriate average life.

Developed by: A. M. Al-Hawari

Issued Sept. 1972

Approved by: Egan

ROOT HOUSES CONT.

TYPE III. Concrete foundation. Concrete floor. Walls are 8" - 10" conc. blk.

Roof is wood frame, insulated and covered with metal sheathing. Double swing doors. Incandescent lighting.

TYPE IV. Concrete foundation. Concrete floor. Walls are 8" - 10" conc. blk.-insulated. Roof is reinforced concrete - insulated. Double swing doors. Incandescent lighting.

COST FACTORS

(Base Height 8')

AREA	500	1000	1500	2000	3000	4000	5000
TYPE III	\$4.40	3.70	3.30	3.05	2.80	2.70	2.65
TYPE IV	\$5.35	4.50	4.00	3.70	3.40	3.30	3.25

Ht. Adjustment: 3% for each foot at wall height variation.

AVERAGE LIFE: Type III = 30 years

Type IV = 35 years

Use standard depreciation tables for appropriate average life.

Issued Sept. 1972

RIDING ARENAS

BASE HT 16'0"
SPECIFICATIONS

Wooden poles or post in concrete. No floor. Low pitched wooden trussed gable roof. Ribbed metal roofing on wooden nailers. Ribbed Metal siding or equivalent on wooden studs. Matching sliding doors. Adequate incandescent lighting.

COST FACTORS

Const. Class "D"

2,000	3,000	4,000	5,000	6,000
\$2.55	\$2.35	\$2.20	\$2.10	\$2.00

7,000	8,000	10,000	18,000	30,000
\$1.95	\$1.90	\$1.85	\$1.75	\$1.65

Height Adjustment: 1½% per foot of Height Variation
Measure Height to Eave only.

ADDITIVES:

Coloured Siding	Add.	\$.10 per sq.ft. to above rates
4' High Wooden Kickboard	"	\$.15 " " " "
Asphalt Floor	"	\$.25 " " " "
Concrete Floor	"	\$.50 " " " "
Fluorescent Lighting	"	\$.15 " " " "
Eavestrough & Downspout	"	\$.05 " " " "

Average Life: 30 Years

HORSE STABLES

GENERAL COMMENTS

With the increase in the number of horses in the province, varying types of stabling are being used. The typical new racetrack and boarding stables are built with wood frame and metal exterior cladding. Where pre-engineered buildings are used - refer to section 1C page 12. Where converted standard farm barns are used apply barn rates in section 1F.

The costs of stall partitions are not incorporated in the rates. All improvements such as tack rooms and living quarters shall be treated as additives. Where tack room facilities are provided refer to section 3R Page 4.

Issued Apr. 73

HORSE STABLESSPECIFICATIONS

FOUNDATIONS & FOOTINGS: Concrete piers 6' to 8' o.c. Below frost line with pressure treated 6" x 6" wood posts set on conc. piers.

FLOOR: Stall area lime stone dust base; corridors earth.

EXTERIOR WALLS: Pressure treated 2" x 6" T. & G. Girts 2" x 4", horizontal wood purlins, metal siding or equiv.

ROOF STRUCTURE: Wood Truss rafter (low pitch) with 26 gauge roofing, and 3/4" rigid insulation.

DOORS: Sliding steel frame doors (covered with steel same as walls) adequate size and number to allow tractor and spreader to service all stalls. Also sufficient number of pedestrian doors.

WINDOWS: Fibreglass perimeter wall panels, a limited number of aluminum single glazed sliding windows with screens.

ELECTRICAL & PLUMBING: Heavy duty wiring with incandescent and fluorescent fixtures adequate water supply tapped to various areas. Larger barns (35 stalls and up) may have a hot water system.

COST FACTORS

1,000	2,000	4,000	6,000	8,000
3.95	3.90	3.80	3.70	3.60
10,000	12,000	14,000	16,000	18,000
3.50	3.40	3.30	3.20	3.10
20,000				
				2.95

ADDITIVES

Coloured Siding Add	\$.10 Per Sq. Ft. to above rates
Ceiling (In Stable Area) +	\$.50 Per Sq. Ft. to actual area
Asphalt Flooring	+ \$.25 Per Sq. Ft. to actual area
Concrete Flooring	+ \$.50 Per Sq. Ft. to actual area
2" Elm Plank Flooring +	\$.65 Per Sq. Ft. to actual area
Stall Drains	+ \$80.00 Each

VEGETABLE STORAGE
PALLET BOX TYPE

CLASS ITEMS	D-4	D-5	D-6
Foundation & Footings	Post or piers with concrete pads or equivalent	Strip Founds., posts or piers with concrete pads, or concrete block foundation wall	Reinforced concrete foundation wall below frost line or equivalent in pressure treated posts embedded in concrete
Floor Structure	Earth	4" concrete on compacted fill	5" reinforced concrete on compacted fill
Exterior Wall Structure	2" X 6" X 24" O.C. or equivalent in untreated wood posts with nailer girts and fillers to carry insulation 30 ga. galv. metal or alum. shtg. with insul.	2" X 6" X 24" O.C. or equivalent in pressure treated wood posts with girts and fillers to carry insulation, 28 ga. galv. metal sheeting with insulation	2" X 6" X 16" O.C. or equivalent in pressure treated wood posts with nailer girts and fillers to carry insulation. Coloured metal exterior sheeting with insulation
Roof Structure	Clear span wood trusses 4' - 6' O.C. 2" X 4" nailer purlins with 30 gauge galvanized or aluminum roofing with insulation	Clear span wood trusses 4' - 6' O.C. 2" X 4" nailer purlins with 28 gauge galvanized metal roofing with insulation	Clear span wood trusses 32" - 48" O.C., 2" X 4" purlins & 28 gauge coloured metal roofing with insulation
Doors & Windows	1 insulated sliding door, 1 insulated pedestrian door, no windows	1 or 2 insulated sliding doors, 1 insulated pedestrian door, 1 or no windows	2 or 3 insulated sliding doors, 1 pedestrian door minimum no. of windows
Electrical Services	Minimum wiring, very few outlets	Adequate wiring minimum no. of outlets	Adequate wiring with average no. of outlets

VEGETABLE STORAGE
PALLET BOX TYPE

COST FACTORS

CONST. CLASS 'D'

AREA CLASS \	2000	3000	4000	5000	6000	8000	10,000	Wall Ht.
4	2.90	2.65	2.45	2.30	2.20	2.10	2.00	16'
5	3.45	3.15	2.90	2.75	2.65	2.50	2.40	16'
6	4.10	3.75	3.50	3.30	3.15	3.00	2.90	16'

Height Adjustment 1 1/2% per ft. of wall height variation

ADDITIVES
INTERIOR LINING

1/4" Plywood per sq. ft. of wall or ceiling area	.18
3/8" " " " " " " "	.20
1/2" " " " " " " "	.24
1/4" Aspenite " " " " " " "	.16
30 ga. Gal. Met. " " " " " " "	.18

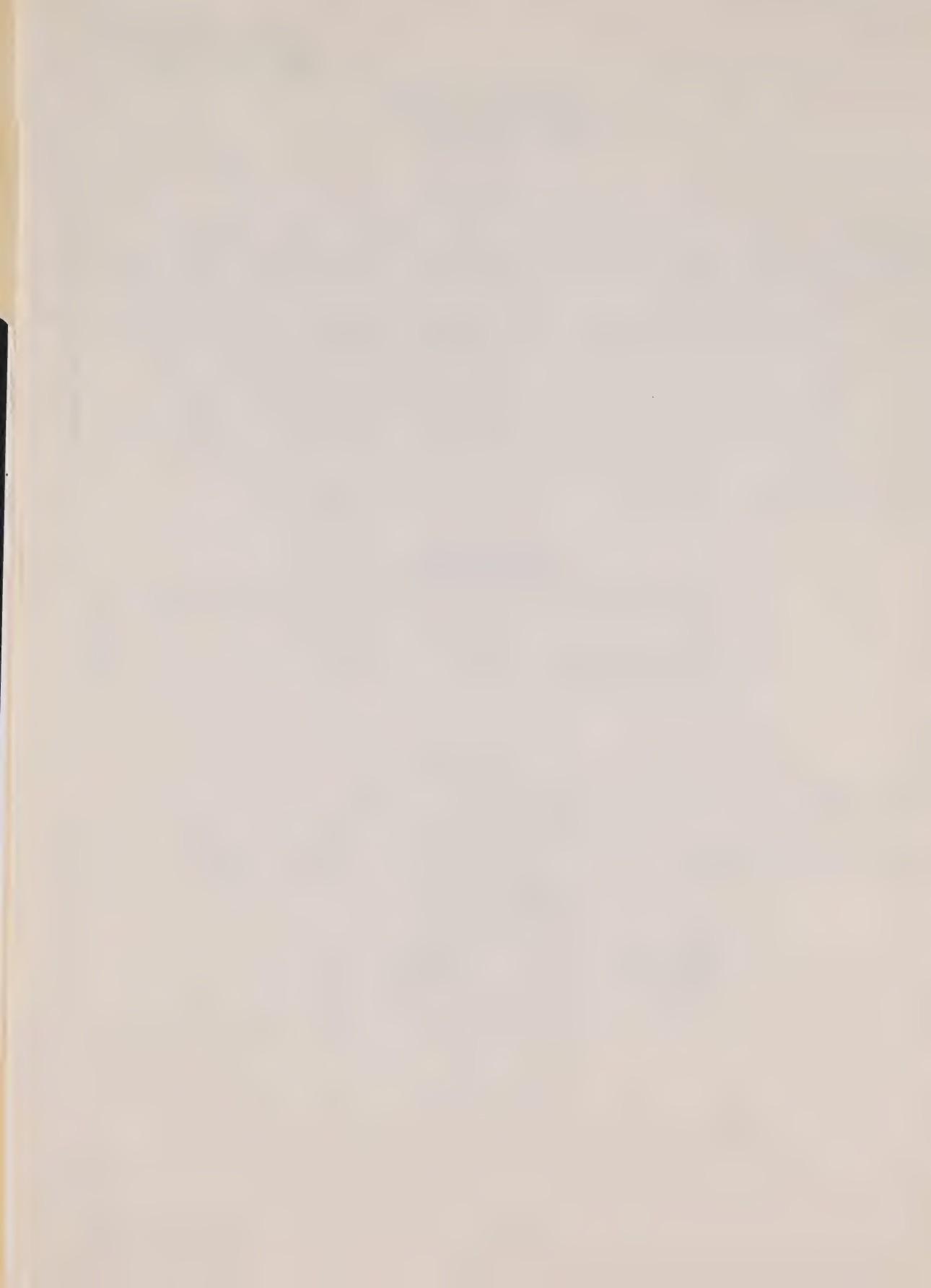
NOTES

Cost factors do not include plumbing, office finish, circulating fans or roof vents.

If a structure does not include insulation deduct .13¢ per sq. ft. of wall and ceiling areas.

AVERAGE LIFE

Class 4	=	20 yrs.
Class 5	=	25 yrs.
Class 6	=	30 yrs.



POTATO STORAGE

GENERAL COMMENTS

The cost of attached loading sheds and work areas are not incorporated in the rates. These sheds will be treated as additives and costed from the Vegetable Storage rates, Section 10F Page 8. (Do not deduct for the missing wall where attached to main building). All other improvements such as ramps, offices, lunch rooms, and washrooms will be additional additives.

POTATO STORAGE

- BULK TYPE -

SPECIFICATIONS

ITEMS	CLASS	D-4	D-5	D-6
FOUNDATIONS		Reinforced concrete strip footings & foundation wall or separate footings for wood poles, footings below frost line	Reinforced conc. strip footings below frost line with reinforced concrete foundation walls	Reinforced conc. strip footings below frost line with reinforced concrete foundation walls
STRUCT. FRAME				
a) Floor const.		4" to 5" reinforced concrete slabs on compacted fill	5" reinforced concrete slab on compacted fill having one air duct per bay, with grating	5" reinforced concrete slab on compacted fill having two air ducts per bay, with grating
b) Ext. Cladding		2" x 8" studs @ 16" o/c or 6" x 6" pressure treated poles @ 48" o/c and necessary girts with alum. or 30 ga galv. metal siding	2" x 10" studs @ 12" o/c or 2" x 12" studs @ 16" o/c with 28 ga. galv. metal siding	2" x 12" studs @ 12" o/c, 2" x 4" girts @ 24" o/c with 26 or 28 coloured metal siding and tentest lining
c) Roof Const.		Wood trusses 48" to 72" o/c with 2" x 4" purlins & alum. or 30 ga. galv. metal roofing with gutters & down pipes	Wood trusses 48" o/c with 2" x 4" purlins, 28 ga. galv. metal roofing with gutters & down pipes	Wood trusses 32" to 48" o/c with 2" x 4" purlins. 26 to 28 ga. coloured metal roofing with gutters & down pipes
d) Doors & Windows		One or more metal faced insul. shipping doors, one pedestrian door no windows	Two or more metal faced insulated doors, one pedestrian door, no windows	Two or more metal faced insulated shipping doors, one pedestrian door, no windows
INTERIOR PARTITIONS		2" x 8" studs @ 16" o/c with boards both sides having $\frac{1}{2}$ " open joints	2" x 10" studs @ 12" o/c with boards both sides having $\frac{1}{2}$ " open joints	2" x 12" studs @ 12" o/c with boards both sides having $\frac{1}{2}$ " open joints

POTATO STORAGE
- BULK TYPE -
SPECIFICATIONS

ITEMS	CLASS	D-4	D-5	D-6
FINISHES				
a) Floors		Plain steel trowel	Plain steel trowel	Plain steel Trowel
b) Ceilings		½" plywood, poly. vapour barrier 6" insulation	3/8" plywood poly. vapour barrier, 6" to 8" insul.	½" plywood or metal ceiling, poly. vapour barrier, 8" to 10" insulation
c) Walls		½" plywood, poly. vapour barrier 4" insulation & boards with ½" spaces for air circulation	3/8" plywood, poly. vapour barrier, 6" to 8" insul. & boards for air circulation	½" plywood, poly vapour barrier, 8" to 10" insul. & boards for air circulation
ELECTRICAL		Adequate lighting minimum outlets and wiring for fans	Adequate lighting average number of outlets and wiring for fans	Adequate lighting average number of outlets & wiring for fans

COST FACTORS

CONST. CLASS 'D'

AREA	4,000	5,000	8,000	10,000	15,000	20,000	30,000	40,000	WALL HT.
CLASS	4.65	4.55	4.30	4.10	3.95	3.80	3.65	3.50	13'-0"
4	4.65	4.55	4.30	4.10	3.95	3.80	3.65	3.50	13'-0"
5	6.30	6.15	5.70	5.40	5.15	4.95	4.70	4.45	13'-0"
6	8.20	7.90	7.30	6.90	6.55	6.25	5.85	5.55	13'-0"

Height Adjustment 2% per ft. of wall height variation

ADDITIVES

- ATTACHED LOADING, WORK & OFFICE AREAS -

- a) Basic shell - use Vegetable Storage Shed rates. 10F page 8.
- b) Loading Ramp - \$1.00 sq.ft. of ramp slab.
- c) Office, Lunch & Washroom areas - to be in-place costed.

NOTE

If concrete air ducts in floor slabs vary from number specified, the in-place cost for additions or omissions use \$10.50 L.F.

Average Life use tables in Vegetable Storage Section 10F page 8.

BARNs
1 STOREY - DAIRY/BEEF

GENERAL COMMENTS

The new one storey dairy and beef barns are becoming increasingly popular, with either a confined or free stall type facility for the animals. The structure unlike traditional barns provide little or no overhead feed storage, the feeding of the animals is by means of a conveyor device or a wagon drive-through operation. The center mangers act as dividers for the aisles and watering facilities but these will not be costed as this is considered part of the stabling.

All liquid manure storage tanks will be costed and deemed as an additive to the barn structure. These tanks vary considerably in area and height. The area for example can be as large as that of the total building, or may take up a much smaller portion. A tank can also be assigned so that it can be utilized as the substructure for the barn above. Some tanks may be sited separately from the barn structure.

BARNs

1 STOREY - DAIRY/BEEF

SPECIFICATIONS

CLASS ITEM	D-5	D-6	D-7
FOUNDATIONS & FOOTINGS	Pressure treated wooden posts 8'0" O.C. embedded in conc. below frost line	Foundation wall below frost line or equivalent in pressure treated posts	Reinforced conc. strip footings below frost line with conc. found. walls
FLOOR STRUCTURE	5" reinf. conc. slab on compacted fill with gutters and conc. curbs. May have liquid manure facilities (see additives)	5" reinf. conc. slab on compacted fill with gutters and conc. curbs May have liquid manure facilities (see additives)	5" reinf. conc. slab on compacted fill with gutters and conc. curbs May have liquid manure facilities (see additives)
EXTERIOR WALL STRUCTURE	Pressure treated wood posts with necessary nailer girts and 30 ga. siding	2" x 6" studs @ 2'0" 3/8" plywood exterior sheathing covered with 28 ga. galv. siding or equiv. in post & girts const. with similar exterior sheathing	2" x 6" studs @ 2'0" O.C. 3/8" plywood exterior sheathing with 26 ga.coloured siding 4" insulation
ROOF STRUCTURE	Wood trusses 4'0" O.C. 2" x 4" nailer purlins.30 ga. galv. steel or alum. roofing	Wood trusses 3'0"-4'0" O.C. or combination truss and rafter with 2 x 4 purlins 3/8" plywood with 2" rigid insul. & 28 ga. galv. roofing with gutters & down pipes	Wood trusses 3'0" 4'0" O.C. or comb. truss & rafter with 2" x 4" purlins & plywood sheathing, 26 ga. coloured roofing with gutters & down pipes.
INTERIOR FINISHES	2"x6" splash boards 4'0" high on perimeter walls	Plywood splash board 4'0" above conc. or equiv.	Plywood sheathing full wall height on perimeter walls or equiv. Plywood or metal ceiling on under side of truss stringer with 6" insul.
DOORS & WINDOWS	See page 14		
ELECTRICAL			

BARNs
1 STOREY - DAIRY/BEEF

SPECIFICATIONS

CLASS ITEM	D-5	D-6	D-7
DOORS & WINDOWS	Sliding doors 1 pedestrian door adequate number of light & vent- ing openings with fitted closers	Metal clad sliding doors 2 pedestrian doors adequate number of windows	Metal clad insul. sliding doors ample for servic- ing. Adequate pedestrian doors. Ample windows
ELECTRICAL SERVICES	Adequate light- ing & outlets	Adequate light- ing and heavy duty wiring for clean- ing or agitation system	Adequate lighting and heavy duty wiring for clean- ing or agitation system

COST FACTORS

AREA CLASS	4000	6000	8000	10,000	12,000	WALL HT.
5	2.80	2.65	2.55	2.45	2.40	10'0"
6	3.65	3.40	3.22	3.10	3.00	10'0"
7	4.55	4.10	3.80	3.60	3.45	10'0"

HEIGHT ADJUSTMENT = 1½% per ft. of wall height variation.

AVERAGE LIFE = See Tables on Section 8F Page 1 - Barn Type II Tables.

ADDITIVES

INTERIOR LININGS

1/4" Aspenite per sq. ft. of wall or ceiling area =	.16
1/4" Plywood per sq. ft. of wall or ceiling area =	.18
3/8" " " " " " " " " =	.20
1/2" " " " " " " " " =	.24
30 ga. galv. metal per sq. ft. of wall or ceiling area =	.18
2" Batt insulation per sq. ft. =	.10
1" Tentest =	.29
4" Loose poured insulation	.12
6" " " "	.18

EXTERIOR WALL

8"-10" Conc. block exterior walls add .25 to the above cost factors.

EXHAUST FANS = 150.00 each.

ISSUED NOV. 75

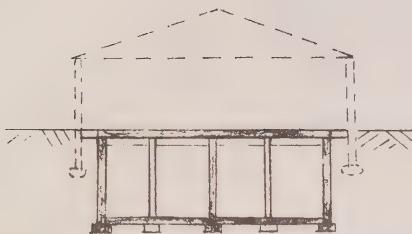
BARNs
ADDITIVES
- LIQUID MANURE TANKS -



(A) TANK ONLY

Tank sited separately with no structure over tank.

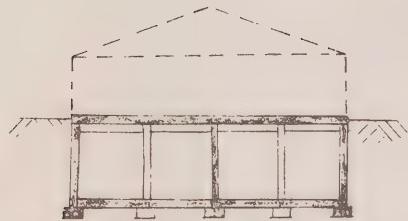
6.15 per sq. ft.



(B) BARN WITH TANK

All barn types with foundation completely independent of tank; having liquid storage under part of the building.

5.70 per sq. ft.



(C) BARN AND TANK

WOOD STUD FRAMING OR CONC. BLOCK STRUCTURE with tank under total building area. Barn uses tank as foundation.

5.13 per sq. ft.

NOTE: ALL TANKS HAVE A BASE HEIGHT OF 8'0". FOR ADJUSTMENT APPLY 7½% PER FOOT OF WALL HEIGHT VARIATION. AVERAGE LIFE OF TANKS 20 YEARS.

MINK SHEDS

The typical mink shed merely provides a very basic shelter for the animals, with the mink placed in small wire cages suspended about 3 feet above ground. (Do not cost the cages). The other types built were long and narrow and low, and are placed on a mud sill cladded with 1/4 plywood or 30 gauge steel siding finishing approximately 3 feet from the ground. The newer structures may be built of slightly higher quality with post girt and truss rafters. These better constructed sheds are normally a more practical shape, nevertheless the cost will remain similar to long low narrow sheds.

Watering facilities are incorporated in the rates.

All structures = 1.20 S.F.

Additive 4" conc. floor = .40 S.F.

Average Life:

Mud sill type = 25 years

Pole & truss = 35 years

CIRCULAR LIQUID MANURE STORAGE TANKS

These rates have been developed for a base year of 1975 and exclude covers and excavation costs; these will be treated as additives.

BASIC COSTS

TANK SIZE DIA. HT.	CAPACITY IN GALLONS	COST PER TANK	TANK SIZE DIA. HT.	CAPACITY IN GALLONS	COST PER TANK
30' X 8'	35,230	\$2,000	80' X 8'	250,500	\$ 8,100
30' X 10'	44,027	2,400	80' X 10'	313,155	9,400
30' X 12'	52,845	2,900	80' X 12'	375,800	10,700
30' X 14'	61,652	3,200	80' X 14'	438,455	12,400
30' X 16'	70,474	3,700	80' X 16'	501,000	14,100
40' X 8'	62,600	2,400	90' X 8'	353,300	9,500
40' X 10'	78,289	2,900	90' X 10'	396,336	11,000
40' X 12'	93,900	3,400	90' X 12'	529,900	12,500
40' X 14'	109,604	3,900	90' X 14'	558,494	14,500
40' X 16'	125,262	4,400	90' X 16'	634,128	16,500
50' x 8'	97,900	2,900	100' X 8'	391,400	11,000
50' x 10'	122,326	3,400	100' X 10'	489,304	12,600
50' X 12'	147,000	4,000	100' X 12'	587,200	14,300
50' X 14'	171,300	4,500	100' X 14'	685,026	16,400
50' X 16'	195,800	4,900	100' X 16'	782,887	18,600
60' X 8'	140,900	3,400	110' X 8'	473,600	11,100
60' X 10'	176,150	4,000	110' X 10'	592,058	13,300
60' X 12'	211,400	4,500	110' X 12'	710,400	16,000
60' X 14'	246,570	5,100	110' X 14'	828,881	18,450
60' X 16'	332,000	5,600	110' X 16'	947,200	20,900
70' X 8'	192,000	3,900	115' X 8'	517,700	11,800
70' X 10'	239,759	4,500	115' x 10'	647,105	14,800
70' X 12'	288,000	5,100	115' X 12'	776,500	17,800
70' X 14'	335,623	5,800	115' X 14'	905,947	22,200
70' X 16'	384,000	6,700	115' X 16'	1,035,368	26,700

HEIGHT ADJUSTMENT: 10% per foot of wall height variation.

NOTE: Aerators are treated as equipment and should not be costed.

Average life of tank is 20 years.

CIRCULAR LIQUID MANURE STORAGE TANKS
ADDITIVES

Cover - add \$1.25 per sq. ft. of cover area. This rate does not apply to slotted floors or any cover housing animals.

TANK EXCAVATION COSTS

TANK SIZE DIA.	DEPTH OF TANK UNDERGROUND						
	4'	6'	8'	10'	12'	14'	16'
30'	\$ 65	\$ 100	\$ 130	\$ 160	\$ 200	\$ 230	\$ 260
40'	110	160	220	270	330	380	430
50'	140	210	280	350	420	490	560
60'	230	350	460	585	690	800	920
70'	275	415	550	685	825	960	1100
80'	320	540	720	900	1080	1260	1440
90'	500	680	910	1140	1370	1590	1828
100'	610	840	1120	1400	1680	1960	2250
110'	730	1020	1260	1700	2040	2380	2720
115'	740	1115	1480	1850	2230	2590	2960

EXAMPLE

70' Dia. Tank 14' High With Cover 6' Of Tank Underground

\$5,800	TANK
4,812	COVER
415	EXCAVATION
<u>\$11,027</u>	

